UM 15

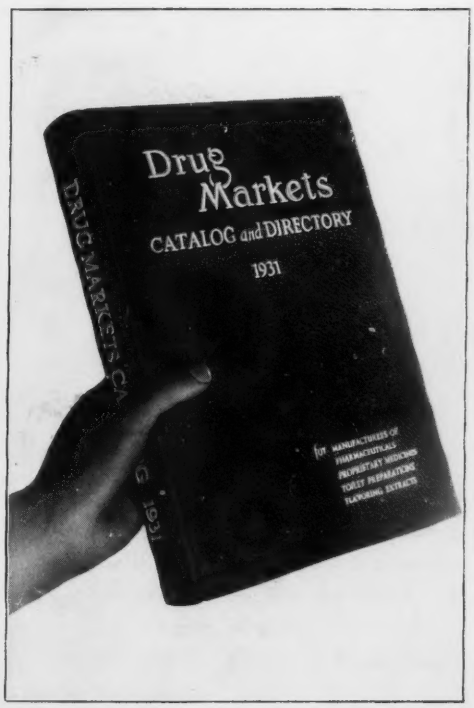
School of Pharmacy
University of Md.

Drug Markets

January 1932

The Magazine of the Manufacturing Drug Trade

Pharmaceuticals, Toilet Preparations, Proprietary Medicines, Flavors



Every Subscriber has a Copy!

From nearly every country in the world, letters acknowledging receipt of Drug Markets CATALOG and DIRECTORY have expressed appreciation of its usefulness abroad.

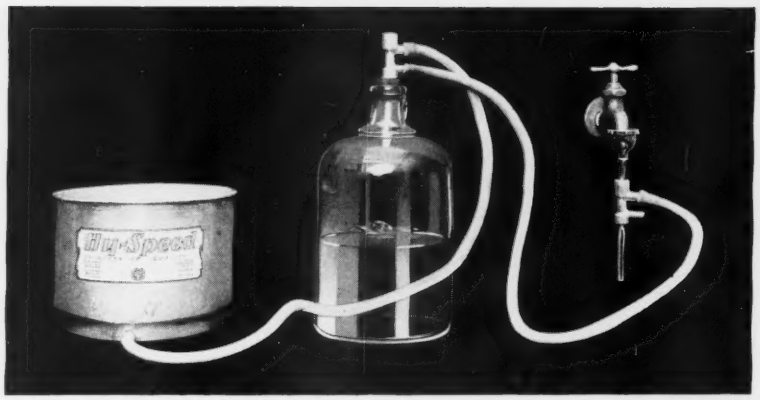
In China, India, Australia, in the great commercial countries in the forefront of international business, the completeness of the reference material, the accuracy of the directory, have furnished a valuable contact with American business.

On Page 8 we print some of these letters. China, Brazil, France or England, they show that Drug Markets CATALOG and DIRECTORY has a useful place wherever Drugs, Cosmetics, Flavors are made or their raw materials dealt in.

Price only

$15

Sold on Trial



The New, Efficient, Inexpensive FILTER

using

Hy-Speed ASBESTOS DISCS

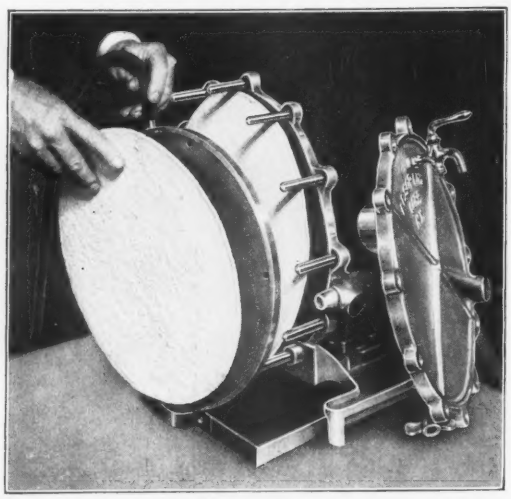
RADICAL: The remarkable filter shown above has been made possible only through the extraordinary, newly-discovered efficiency of *"Hy-Speed"* Asbestos Discs. These identical Discs were created and perfected by ALSOP engineers for the new nationally known, *"Hy-Speed"* Electric-Power Filters which sell at from $155.00 to $3,000 each.

RESULTS: It produces results far superior to those obtained with any small filter yet devised, and gives an ultra-brilliant polish to almost any liquid at high filtering speed. The Disc cannot possibly break to pass unfiltered liquid into the finished product.

PRICELESS: Its adaptability to laboratory work, moderate production, quick cleaning and change-over for different products, makes it an absolute necessity to any concern with filtering problems on small-batch work.

OPERATION: The Asbestos Disc, placed between two screens in the bottom of the 5-gallon container, has 144 square inches of filtering area. The vacuum pump, attached to any water-faucet, creates a vacuum of up to 28 inches. This means that *over one ton* pressure is used to force the liquid through the disc.

ELECTRIC POWER FILTERS



Showing 2-Disc Bench Model taken apart for cleaning

ACT NOW!: The demand for this unusual filter bargain is taxing our production capacity. ORDER NOW, to insure prompt delivery, on the convenient Order Blank below.

ORDER BLANK

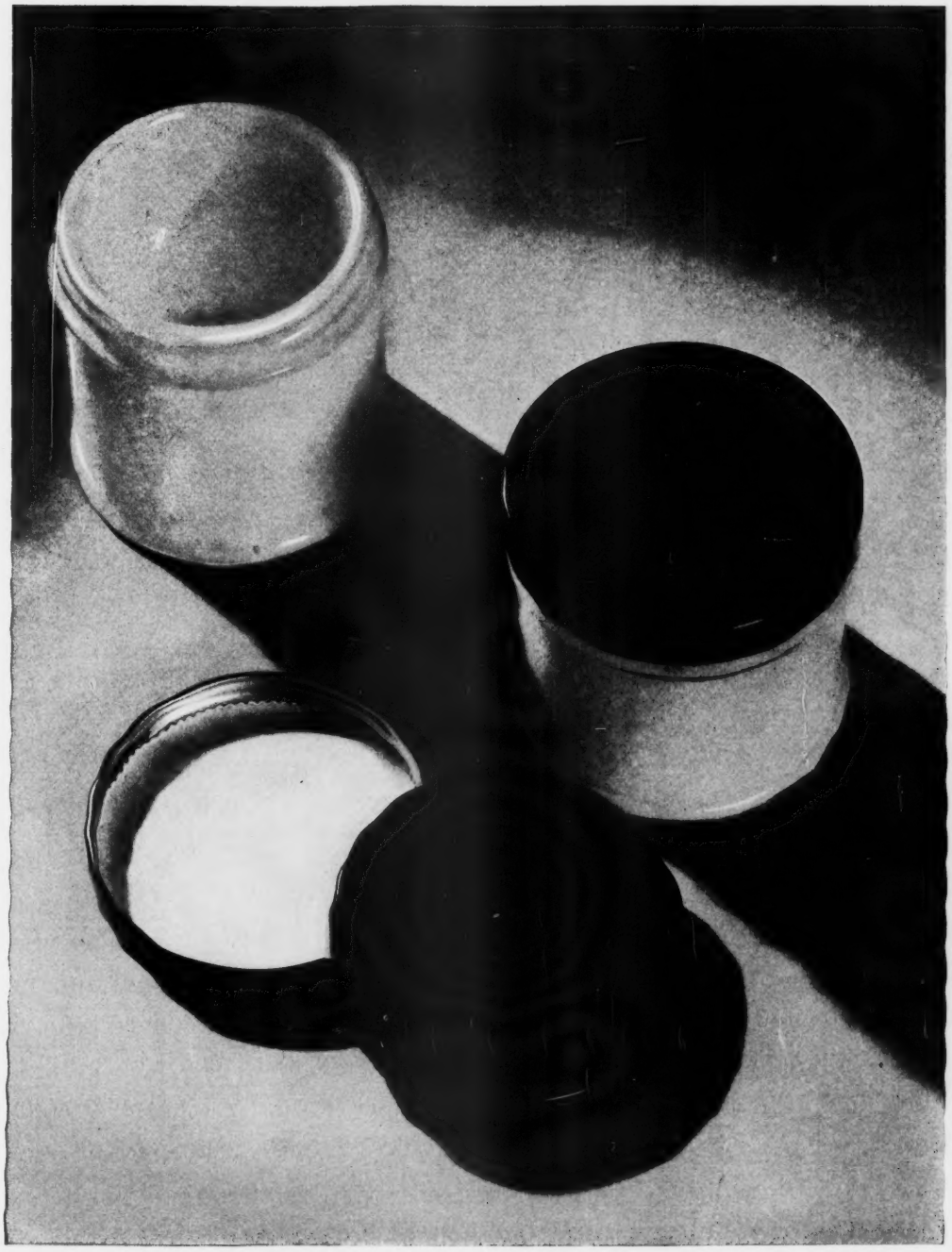
ALSOP ENGINEERING CORP.,
39 West 60th Street, Dept. D1
New York City.

Gentlemen: Rush us one $15 "Hy-Speed" Asbestos Disc Filter.

Name .....

Address .....

NOTE: State kind of liquid to be filtered so that proper type discs can be supplied.
Extra Discs cost only $1 for 5.



Phoenix S T Cap

Not a molded closure, but a metal cap having all advantages of metal cap construction. Non-breakable . . . flexible . . . may be supplied in brilliant solid colors as well as black . . . or, lithographed with your trade mark or other design.

PHOENIX-HERMETIC COMPANY, CHICAGO and NEW YORK

January 1932

Drug Markets

Established 1914

The Magazine of the Manufacturing Drug Trade

The Magazine for Manufacturers of Pharmaceuticals, Toilet Preparations, Proprietary Medicines, and Flavors. Of primary interest to executives in direct charge, or supervising purchasing, production, and technical control, and for executives concerned with general administrative problems of the industry.

Editorials 15

A Little Knowledge—In the Right Direction—Results or Principle?—Unfair Pricing—Profits and Sales

Features

Intelligent Attacks on Predatory Price Cutting 19
More Stringent Regulatory Work ? 23
French Mimosa 27
The Drug Trade in Depression 29
Absorption Bases 31
Essential Oils Price Situation 33
New Vitamin Standards 35
Tablet Making 39
For Plant Managers 45

New and Non-Official 17
Ten Years Ago 17
News 47
Patents 80
Abstracts 82
Raw Material Prices 85
Drug Market Place 90
Buyer's Guide 4
Index of Advertisers 96

Copyright 1932 by Drug Markets, Inc.

PACKAGING

With the February issue of Drug Markets there will be changes one of which will be the inclusion of a packaging section. In this section real information regarding the problems of packaging of drugs and toilet preparations will appear without any of the ballyhoo that generally is the main ingredient of articles on packaging.

VOL. XXX

DRUG MARKETS, INC.
PUBLISHERS

NUMBER 1

Publication Office, 28 Renne Ave., Pittsfield, Mass. Editorial and General Office, 101 W. 31st St., N.Y. City

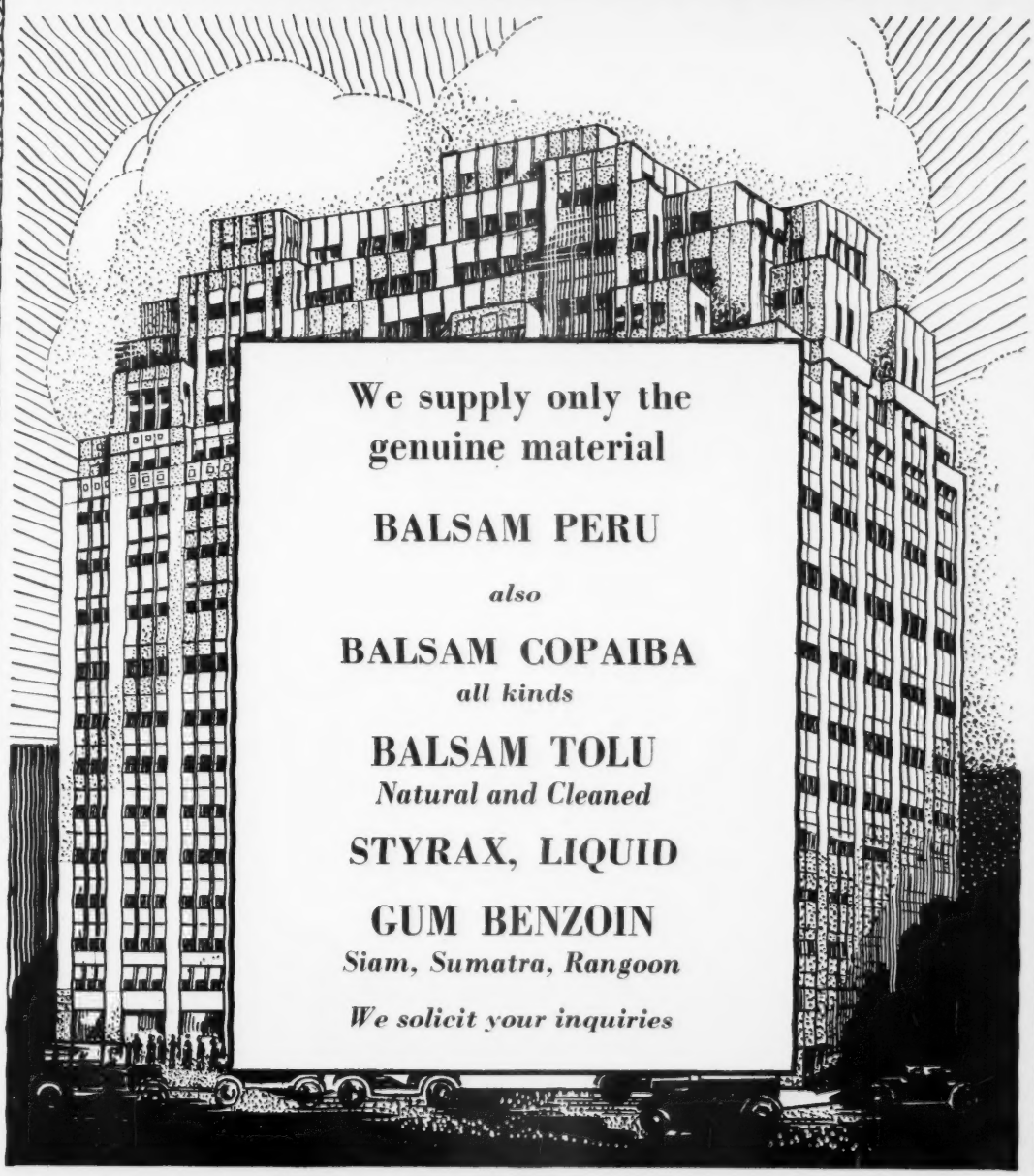
Editor
THOMAS R. FARRELL

Business Manager
FRAZER V. SINCLAIR

PUBLISHED MONTHLY AT PITTSFIELD, MASS., SUBSCRIPTION PRICE, TWO DOLLARS A YEAR, IN ADVANCE, FOREIGN COUNTRIES THREE DOLLARS, THREE WEEKS' NOTICE IS REQUIRED TO CHANGE SUBSCRIBER'S ADDRESSES, AND WHEN NOTIFYING KINDLY GIVE BOTH OLD AND NEW ADDRESSES; PRINTED BY THE SUN PRINTING COMPANY, PITTSFIELD, MASS. ENTERED AS SECOND CLASS MATTER, JANUARY 1, 1928 AT THE POST OFFICE AT PITTSFIELD, MASS., UNDER THE ACT OF MARCH 3, 1879.

D&O
ESTABLISHED IN 1798

ESSENTIAL OILS
and Kindred Products



We supply only the genuine material

BALSAM PERU

also

BALSAM COPAIBA
all kinds

BALSAM TOLU
Natural and Cleaned

STYRAX, LIQUID

GUM BENZOIN
Siam, Sumatra, Rangoon

We solicit your inquiries

DODGE AND OLCOTT COMPANY
180 Varick Street New York City

"The integrity of the house is reflected in the quality of its products."

Copyright 1930

Buyers' Guide

RAW MATERIALS

ALCOHOLS

U. S. Industrial Alcohol Co.

AROMATIC CHEMICALS

Dodge & Olcott Company
P. R. Dreyer Inc.
Fritzsche Brothers, Inc.
Givaudan-Delawanna, Inc.
Magnus, Mabee & Reynard, Inc.
Schering Corporation
Ungerer & Co.
van Ameringen-Haebler, Inc.

BEESWAX

Theodor Leonhard Wax Co., Inc.
Will & Baumer Candle Co., Inc.

BIOLOGICAL CHEMICALS

Wilson Laboratories

BORAX

American Potash & Chemical Corp.

COD LIVER OIL

P. R. Dreyer Inc.
Chas. L. Huisking & Co.
Norwegian Cod Liver Oil Association

COLORS

Interstate Color Co., Inc.

CRUDE DRUGS

Bamberger, Bloch & Landesman, Inc.
S. B. Penick & Company

DENTIFRICE BASES

Iliff-Bruff Chemical Co.
Industrial Chemical Sales Co., Inc.
John & E. Sturge, Ltd.

ESSENTIAL OILS

W. J. Bush & Co., Inc.
California Fruit Growers Exchange
Dodge & Olcott Company
P. R. Dreyer Inc.
Fritzsche Brothers, Inc.
Givaudan-Delawanna, Inc.
Magnus, Mabee & Reynard, Inc.
Plaimar, Ltd.
A. M. Todd Co.
Ungerer & Co.
van Ameringen-Haebler, Inc.

FLAVORING MATERIALS

W. J. Bush & Co., Inc.
California Fruit Growers Exchange
Dodge & Olcott Company
P. R. Dreyer Inc.
Fritzsche Brothers, Inc.
Magnus, Mabee & Reynard, Inc.
Ungerer & Co.
van Ameringen-Haebler, Inc.

GELATINES

Coignet Gelatines

GLYCERIN

Colgate-Palmolive-Peet Co.
Will & Baumer Candle Co., Inc.

MEDICINAL CHEMICALS

Abbott Laboratories
Benzol Products Co.
Citro Chemical Co.
Dow Chemical Co.
Heyden Chemical Corp.
Chas. L. Huisking & Co.
E. C. Klipstein & Sons, Co., Inc.
Mallinckrodt Chemical Works
Merck & Co., Inc.
Monsanto Chemical Works
N. Y. Quinine & Chemical Works, Inc.
Chas. Pfizer & Co., Inc.
Röhm & Haas Co., Inc.
Schering Corporation
Swann Corporation

MINERAL OIL

M. W. Parsons Imports
Schliemann Companies, Inc.

SOAPS

J. L. Hopkins & Co.
S. B. Penick & Co.
John Powell & Co., Inc.

VANILLIN

Fritzsche Bros., Inc.
Givaudan-Delawanna Inc.
Magnus, Mabee & Reynard, Inc.
Monsanto Chemical Works

CONTAINERS

ADHESIVES

Nat'l. Adhesives Corp.

BOTTLES

Maryland Glass Corp.
Owens-Illinois Glass Co.
Swindell Bros.

COLLAPSIBLE TUBES

Art Tube Co.
New England Collapsible Tube Co.
White Metal Mfg. Co.
A. H. Wirz, Inc.

VIALS

Kimble Glass Co.

CLOSURES

CORKS

Armstrong Cork Co.

INSIDE THREAD CAPS

Spring Stopper Co.

LINERS

Armstrong Cork Co.

METAL CAPS

Aluminum Seal Co.
Anchor Cap & Closure Corp.
Crown Cork & Seal Co.
Ferd. Gutmann & Co.
Pennsylvania Glass Products Co.
Phoenix Hermetic Co.

MOLDING COMPOUNDS

Anchor Cap & Closure Corp.
Armstrong Cork Co.
Pennsylvania Glass Products Co.
Resinox Corp.

MACHINERY & EQUIPMENT

FILLING MACHINES

Alsop Engineering Co.
Arthur Colton Co.
F. J. Stokes Machine Co.
Stokes & Smith Co.

LABELING EQUIPMENT

O & J Labeling Machine Co.

MIXING EQUIPMENT

Alsop Engineering Co.
Arthur Colton Co.
Mixing Equipment Co., Inc.
F. J. Stokes Machine Co.

PACKING & CARTONING

Stokes & Smith Co.

PHARMACEUTICAL MACHINERY

Arthur Colton Co.
F. J. Stokes Machine Co.

And Now—
We Offer You
The LITTLE GLASS JUG

•

•THE demand for Olive Oil is growing. That means more brands — some of them sold on a competitive price basis—many of them of inferior quality. But the demand is for QUALITY olive oil—for medicinal and fine table use. Your customers won't be long content with anything but the best.

That implies PARAGON OLIVE OIL—the full bodied, fine flavored, absolutely pure virgin oil from the first pressing of the finest olives grown. PARAGON OLIVE OIL is produced and packed under the most sanitary conditions. It is the oil favored by physicians, dietitians and connoisseurs—the olive oil on which to build your business.

Heretofore supplied only in tins, PARAGON now announces "The Little Glass Jug"—a 4-ounce, appetizing looking, convenient package that your customers will be quick to appreciate AND BUY. Here is olive oil purity in sight, a package that will be used "as is" on the finest tables.

A handsomely finished card for counter display showing the PARAGON Jug to advantage is included with each carton of twenty-four bottles, together with folders and other advertising material.

PARAGON OLIVE OIL will, of course, continue to be packed in the beautifully decorated half-pint, pint, quart, gallon and 5 gallon tins already so widely known and used. But the new 4 ounce glass jug is going to get you an immediate response—more sales—more profits.

May we give you complete information?

MAGNUS, MABEE & REYNARD, Inc., 32 Cliff Street, New York

ANCHOR CLOSURES GLORIFY AND PROTECT
YOUR PRODUCT
ANCHOR MOLDED CAPS — have unusual sealing qualities. The special thread construction, the liner retaining features, the wedge construction of the jar caps, as well as their general strength and sturdiness, combine to make them the most efficient cap of this type ever offered.

Lustrous Beautiful

YET HIGHLY EFFICIENT AS SEALS

BEAUTY alone is not enough in closures. What is of far more importance to you as a manufacturer are their sealing qualities. Every poorly fitting cap, every liner that fails to do its duty, every package that allows a product to evaporate or leck, endangers the good will of some hard earned customer—whom you have spent many dollars to secure.

Beneath the smooth, gleaming surfaces of an Anchor Molded Cap are unique features of construction that make it as effective in sealing as it is handsome in appearance. Liners are held securely in place by the liner retaining ledge cnd liner recess. Caps come completely assembled. Liners can't drop out before or during application either by hand or machine—and they will stay there for the entire life of the package.

Another thing: the liners are free-wheeling. Although positively held in place, they are free to rotate—insuring a firm fit on the bottle top, without danger of injury to the liner surface.

For those who request it we have in preparation a complete, attractive booklet describing the features and uses of Anchor Molded Caps. Write for your copy.

★ ANCHOR CLOSURE ENGINEERS ★

Anchor sales representatives are packaging experts, interested in both production problems as well as merchandising.

Working as they do with many diverse products of widely varying physical and chemical properties, they are by nature resourceful and open-minded. So, when you have a tough nut to crack or want to change your packing methods, call in the Anchor man. At the very least you will find his grasp of your problem intelligcnt and his attitude helpful.

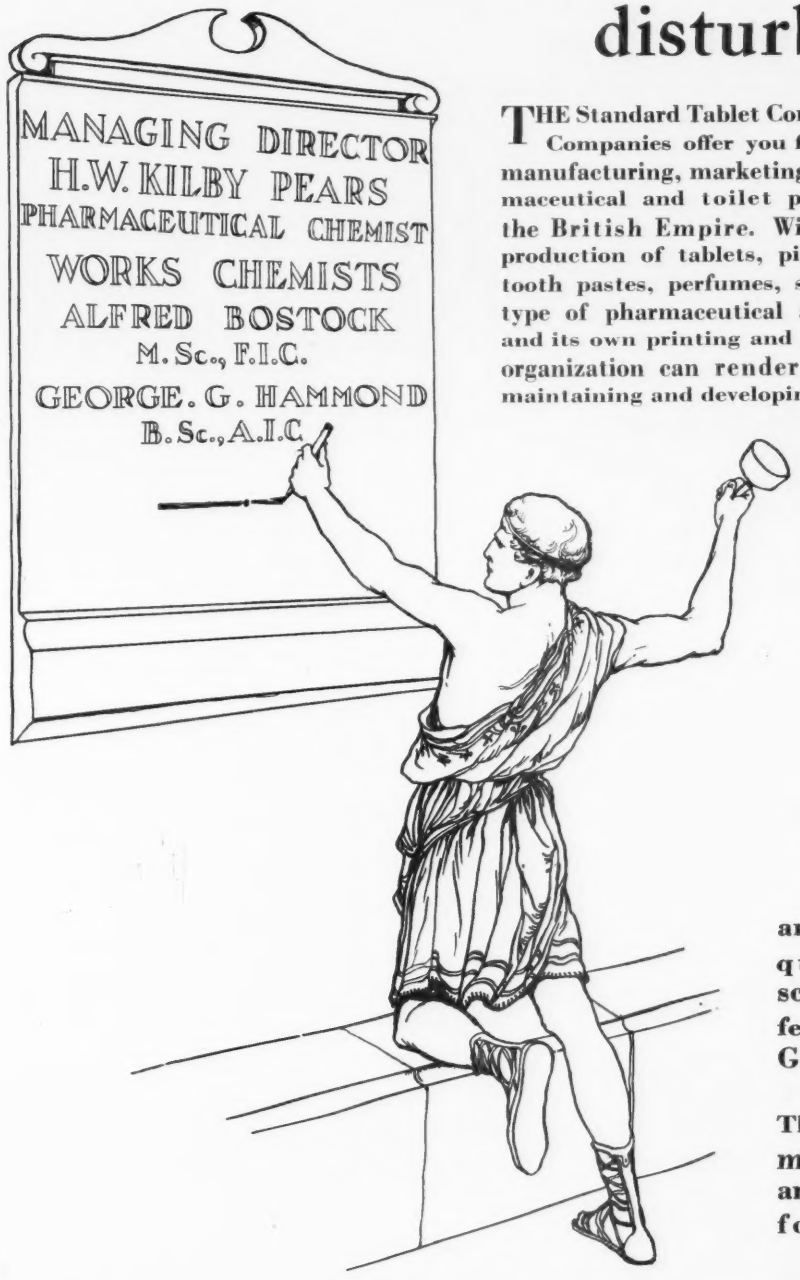
Behind each Anchor man are the accumulated experience and facilities of the Anchor rcsearch staff and laboratory.

Anchor Cap & Closure Corporation
Long Island City, N. Y. Toronto, Canada
Branches in all Principal Cities

ANCHOR IS CLOSURE HEADQUARTERS

THE STANDARD TABLET Co.
HOVE, ENGLAND.

Don't let BRITISH TARIFFS disturb you



THE Standard Tablet Company and its associated Companies offer you fifty years' experience of manufacturing, marketing and distributing pharmaceutical and toilet preparations throughout the British Empire. With departments for the production of tablets, pills, complexion creams, tooth pastes, perfumes, soaps and almost every type of pharmaceutical and toilet preparation and its own printing and box-making plants, this organization can render unequalled service in maintaining and developing your British trade.

American manufacturers desirous of having their products made in Britain are invited to write to the Managing Director, The Standard Tablet Co., Goldstone Laboratories and Chemical Works, Hove, England.

A QUALIFIED DIRECTORATE and STAFF

are guarantees of quality, accuracy, scientific control, Perfection of finish and General Excellence.

The superbly equipped *modern laboratories* are specially designed for economical production.

Around the World with Drug Markets CATALOG and DIRECTORY

IN OUR column, "Cum Laude", we have previously published letters from buyers, chemists, plant managers and others engaged in manufacturing pharmaceuticals, proprietaries, cosmetics, flavors, etc., which have shown a real appreciation of the value of the book from all parts of the industry.

Now, from all parts of the world, have come letters praising the completeness and accuracy of Drug Markets CATALOG and DIRECTORY. Once more we take particular pride in presenting these letters—this time showing the enthusiasm with which this volume was received in the outstanding industrial centers of the world.

A. G. McCourt, *Secretary,*
Foreign Buyers American Chamber of Commerce

Very many thanks for the attractive and valuable copy of Drug Markets CATALOG and DIRECTORY. We are sure this book will be of value to us in referring people to it.

S. & G. De Pasquale,
Messina, Italy

We have just received your Catalog and Directory which we can assure you is going to have a prominent place on our desk.

Dr. G. C. A. van Dorp, *President,*
N. V. Societeit voor Chemische Industrie,
Katwyk Aan Zee, Holland

Thank you very much for Drug Markets CATALOG and DIRECTORY which is indeed a very interesting publication.

Max Techow, *General Manager, G. C. F. Techow,*
Hamburg, Germany

I have studied the book carefully and have found it of great value to me.

H. J. Anderson-Tesch,
Stockholm, Sweden

We have examined the copy of Drug Markets CATALOG and DIRECTORY with great interest and beg you to accept our compliments upon the contribution you have made to the industry with the publication of this volume.

M. A. Belloso & Hno.,
Maracaibo, Venezuela

We expect to find constant use for this volume for future references to American suppliers.

Isaias G. Lopez & Cia.,
Bogota, Columbia

This Catalog and Directory is exceedingly valuable for its complete information on what and where to buy commodities connected with the ever-growing drug trade. For us particularly it is of inestimable value as a source of information and we congratulate you upon the attractive manner in which the material is presented. The book is worthy of the highest commendation.

O. Brassart Pharmaceutical Products, Ltd.,
Zurich, Switzerland

We are much obliged for this valuable volume as we are in steady business relations with the United States.

Foster-McClellan Co.,
London, England

It is admirably arranged and its utility is unquestionable.

Marcos Marques,
Barcelona, Spain

Our best thanks are due you for such a valuable book.

Wm. Porter & Co., Ltd.,
London, England

We would like to say that this volume is the best work of its kind we have seen and is likely to be of great use in the future.

Société des Usines Chimiques Rhône-Poulenc,
Paris, France

This is a very interesting book and certain to be of great use to us.

Shionogi & Co., Ltd.,
Osaka, Japan

We find the book splendidly made up and very well arranged and it will prove a valuable guide to us.

Surn Singh Ram Singh,
Amritsar, India

This is a very valuable book which was very much needed. It will bring both countries still nearer in the drug trade.

Ch. Takeda & Co., Ltd.,
Osaka, Japan

We have found your Catalog to be very informative and it cannot fail to serve us in many respects as a skillfully compiled useful book of reference.

Dr. A. Wander S. A.,
Berne, Switzerland

We are convinced this book will be of much service to us.

A. T. Wheeler, *Director, Wheeler & Huisking, Ltd.,*
London, England

This is a very useful book and we would like to congratulate you on the very interesting matter contained therein and the excellent way in which it has been compiled. We feel sure that there will be many occasions on which we shall refer to it for the interesting information that it contains.

Dr. Zdenek F. Klan,
Praha VII, Czechoslovakia

I wish to express my appreciation of Drug Markets CATALOG and DIRECTORY.

Th. Muhlethaler S. A.,
Nyon, Switzerland

The commercial part of this volume is only of minor interest for European users but the sections treating of the various commodities are so much the more captivating for them.

Whiffen & Sons, Ltd.,
London, England

We congratulate you on the production of a very useful guide for buyers and we thank you for this volume which we shall find most useful.

Dr. Sergio Herrera,
Havana, Cuba

I want to congratulate you for the very valuable data presented in this book which makes it so useful in every respect. The task accomplished deserves the commendation of everybody in the field covered by the book.

Ingram & Bell, Ltd.,
Toronto, Canada

We are much impressed with its appearance and feel that it will prove useful.

Hardivilliers, Olivier & Cie.,
Shanghai, China

You are indeed to be complimented upon your Catalog and Directory.

Give YOUR LINE MATCHED BEAUTY

New Artmold-capped line of Charlotte Gerbaulet preparations, brought out by Dr. C. Jaeger Laboratories, New York.

with ARTMOLD CAPS *and* JAR COVERS

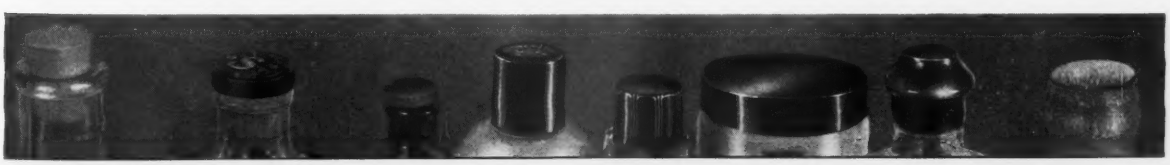
A FAMILY resemblance between your various bottles and jars makes buyers recognize and accept even your newest item.

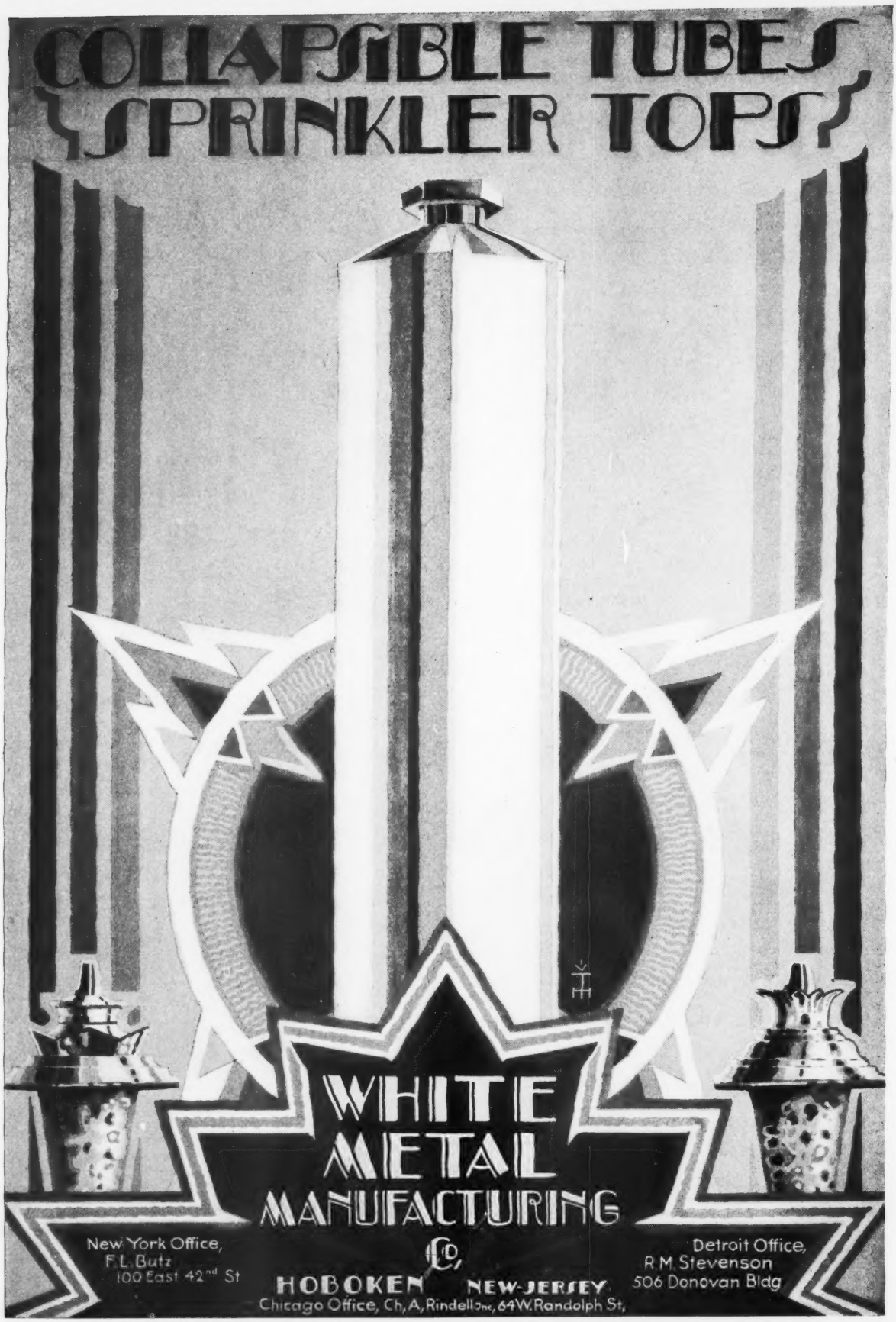
Armstrong offers complete "families" of molded caps and jar covers. These Artmold Caps are available in a wide selection of stock designs and also in distinctive special designs molded-to-order for your own packages. All sizes and all colors.

Package designing service free! Our Package Styling Department will gladly help you design your labels, containers, and cartons, as well as your closures. And our laboratories will study your sealing problems. No obligation. For this service and for samples and prices of Artmold Caps or any other type of closure (see list below), write Armstrong Cork Company, 913 Arch Street, Lancaster, Pennsylvania.

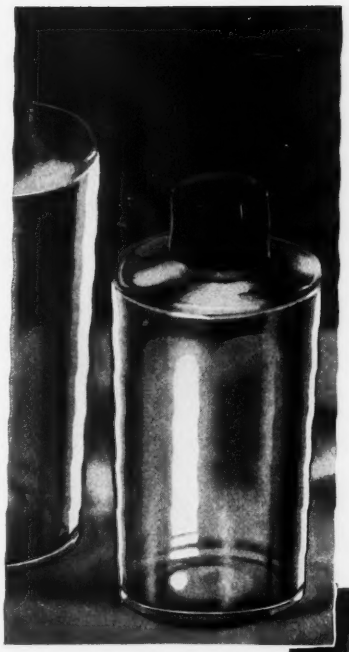
Armstrong's Artmold Caps

Armstrong offers CORKS OF ALL KINDS . . . ARTMOLD CAPS . . . ARTMOLD JAR COVERS . . . EMBOSSED TOP CORKS . . . DAUBERS . . . CROWNS
DU PONT CELLULOSE CAPS . . . DU PONT CELLULOSE BEVERAGE BANDS . . . APPLICATORS OF ALL KINDS . . . RUBBER STOPPERS . . . CAP LINERS . . . BUNGS



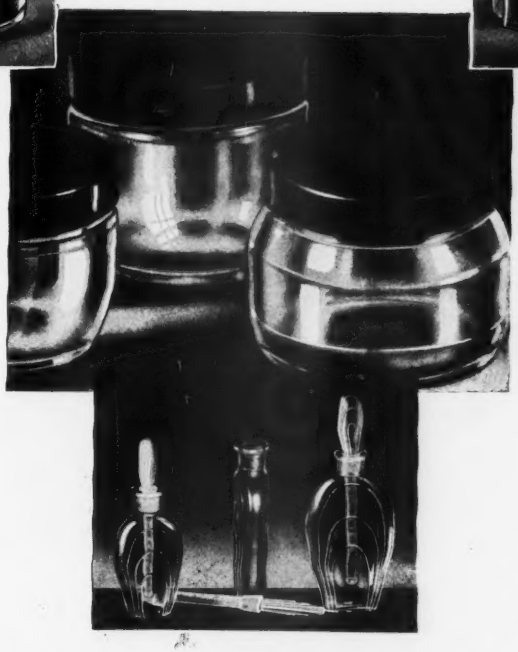

COLLAPSIBLE TUBES
SPRINKLER TOPS
WHITE
METAL
MANUFACTURING
Co.
HOBOKEN NEW-JERSEY
New York Office,
F. L. Butz
100 East 42nd St
Detroit Office,
R. M. Stevenson
506 Donovan Bldg
Chicago Office, Ch. A. Rindell Inc., 64 W. Randolph St.

A complete glass container service



The modern trend is well carried out in the design of these bottles.

Our stocks include a wide variety of attractive jars in a full range of sizes.



The Imperial Oblong—available in ten sizes—from one-half ounce to thirty-two ounces.

The smart hand-blown flaconettes below add prestige to any perfume.

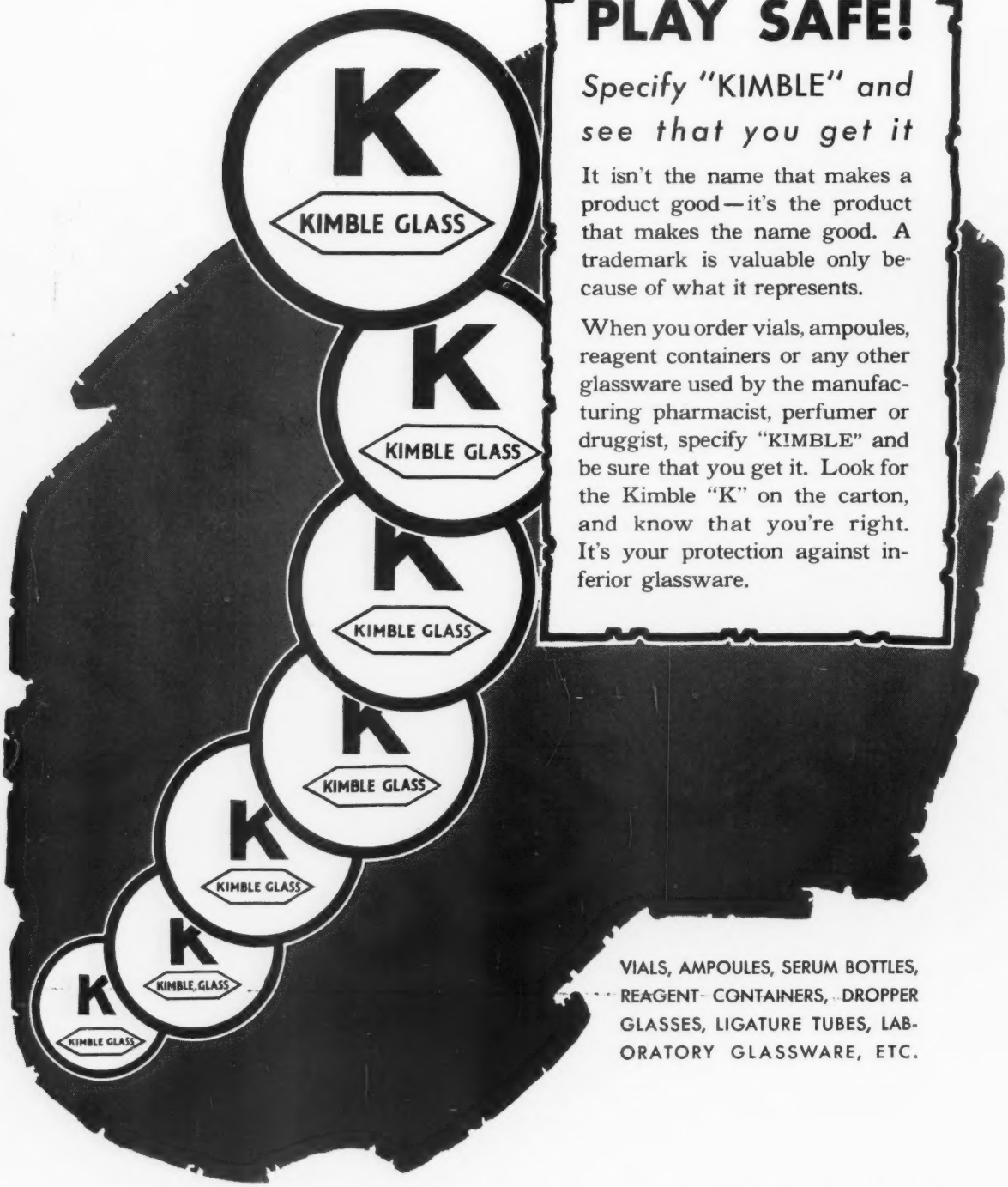
Whatever your packaging needs may be, there is an attractive container among our stocks which will offer the proper solution to your problem. And we mean by that—a complete solution, such as can be provided only by the wide range of facilities offered by Owens-Illinois.

From the bottle or jar itself to the details of packing and designing the shipping carton, Owens-Illinois offers a complete packaging service aimed constantly at the target of increased sales for your product. Owens-Illinois Glass Company, Toledo, Ohio.

OWENS-ILLINOIS

BOTTLES AND GLASS CONTAINERS

THE VISIBLE SIGN OF
INVISIBLE QUALITY



PLAY SAFE!

Specify "KIMBLE" and see that you get it

It isn't the name that makes a product good—it's the product that makes the name good. A trademark is valuable only because of what it represents.

When you order vials, ampoules, reagent containers or any other glassware used by the manufacturing pharmacist, perfumer or druggist, specify "KIMBLE" and be sure that you get it. Look for the Kimble "K" on the carton, and know that you're right. It's your protection against inferior glassware.

VIALS, AMPOULES, SERUM BOTTLES, REAGENT CONTAINERS, DROPPER GLASSES, LIGATURE TUBES, LABORATORY GLASSWARE, ETC.

KIMBLE GLASS COMPANY

VINELAND, N. J.

Branch Offices: New York, 1440 Broadway; Philadelphia, 1616 Walnut St; Boston, 131 State St.; Chicago, 402 W. Randolph St.; Detroit, General Motors Bldg.

COLOR AND DESIGN CAN MAKE A MIGHTY DIFFERENCE!

OPPORTUNITY

Comes in a Tube

In 1932 some one manufacturer whose product reaches the public in tubes, will bring out a package that will prove a notable success in building bigger sales.

What *you* know about your product, plus what *we* know about color and design and making good tubes, may make *you* that manufacturer.

We are ready to talk this over and to make suggestions. Why not write us . . . *now?*

NEW ENGLAND COLLAPSIBLE TUBE COMPANY

17-35 Waller St., New London, Conn.
3132-34 S. Canal St., Chicago, Ill.
New York Office: 370 Lexington Ave., (Cor. 41st St.)

NEW ENGLAND COLLAPSIBLE TUBES

Mallinckrodt his choice

When a druggist . . .
and now as a manufacturer

An Iowa Manufacturer writes—

"WE HAVE been buying chemicals from you for over a period of twenty-five years. In fact all the time that our firm has been in business.

"The writer was attracted to your firm in the first place from his long association in the drug business, and being familiar with quality chemicals. Your quality and service have kept us steady customers ever since."

Mallinckrodt Chemical Works

Manufacturers of Fine Chemicals for Medicinal, Analytical, Photographic, and Industrial use.
Separate catalogs are available on each line.
Copies sent on request.

School of Pharmacy
University

Drug Markets

Vol. XXX JANUARY 1932 No. 1

A Little Knowledge

IF THE future of the drug manufacturing industry is to be secure, it is plainly up to those now engaged in it to fight for their law given rights. Last month we told of a plan to be evolved by the Food and Drug Administration to permit the labels of ethical preparations to carry to the physicians information regarding the use of the preparations, although this information would be unintelligible to the layman. We were informed that the method to be used was that of Latin names of diseases. This method Drug Control Chief Cullen denies. However, Dr. Cullen admits that he intends to inaugurate some method of accomplishing the same thing, but he refuses to divulge the details just yet.

WE CAN not now, nor could we ever see why information regarding the treatment of disease by physicians should be any secret. Certainly there is no law in this country by which anyone can be prevented from teaching to the public methods of preventing or treating disease. The right of self-medication has never been denied to the American public, and by the same token the right to knowledge regarding self-medication has never been denied.

THERE are diseases which the physician treats in an indirect manner. In many of these cases the physician's main duty is to watch for the development of more dangerous diseases. In the large majority of cases the more dangerous diseases do not develop. The patient could have treated himself as well as the physician if he had been allowed to go to his drug store and purchase the medicine for alleviating either the symptoms or attending conditions of the diseases. However, the Food and Drug Administration —with its high moral sense of duty— must not allow the ordinary layman to possess that knowledge.

IF THERE is one point on which the Food and Drug Administration has been consistently wrong during recent years it is on this one point of denying the public any labeled medicines for such diseases as the simple cold, influenza, and other diseases. The public has every right to know about the simple treatments for these diseases even though in some cases the patient may be worse off for his knowledge. The Administration evidently feels that a little knowledge is a bad thing. But we really wonder who the Administration is protecting. Is a little knowledge a bad thing for the possessor of the knowledge, or is it a worse thing for the medical profession ?

In the Right Direction

Decision of the part of the Food and Drug Administration to disallow conditional importation and subsequent recleaning of crude drugs which differ from the standards in that they contain an excess of ash, and insoluble organic or inorganic matter is a step in the right direction. There is no reason why the importers in this country should be confronted with the annoyance of recleaning this material since the goods can just as easily be cleaned of this material in foreign countries and sent into this country in a condition which will meet the standards.

The Food and Drug Administration has undertaken this step as part of an economy program requested by the Secretary of Agriculture. The Secretary feels that with the money available he will no longer be able to allow his limited force to devote its time to such details and supervision when, as a matter of fact, there is no reason why such work should be undertaken. The Secretary feels that the Administration has co-operated with importers for a long period in attempting to have the foreign shippers send in goods which meet the requirements. It is now up to the foreign shippers to send in proper goods or take them back.

That the move is really an excellent move from the point of view of importers will probably be realized as time goes on. In the future there will be no need for any importer of goods to accept goods that are not guaranteed to pass the Department, for if he does agree to accept the goods under existing conditions, he has only himself to blame if his goods are ordered reexported. In the future importation of crude drugs regarding these impurities should be a simple matter: either they are right or they are not paid for.

• • •

Results or Principle?

It is a peculiar fact that oftimes the ideal manner of approach to a problem is not the one that produces the best results. Sometimes it is far better to maintain a method that may seem antiquated to the modern theorists, than attempt to make a radical change, thereby upsetting practically everything that has gone before, and creating a period of chaos resulting very often in a return to the old order of things.

Students of politics know the eloquent arguments delivered in favor of direct primaries and direct election of United States Senators. Students of politics as well as many citizens know the faults that occurred under the new order, and they also know that direct primaries have been abandoned in many instances. The new methods were not an improvement over the old so far as many concerned could see.

It is much the same with the determination of drug standards by the U. S. Pharmacopoeia Convention. To attempt to scrap the present order of determining drug standards and turn this work over to a commission appointed by the President of the country would be a step that most everyone concerned would probably be desirous of retracing at some future date.

It is easy to argue in a logical manner as to why such a step should be taken. It is easy to make the statement that an industry should not set up its own standards. But as a matter of fact the drug manufacturing industry is far from setting up its own standards, and the opponents of the present system are quite frank to admit that the present revision committee is doing an excellent job.

• • •

Unfair Pricing

That the problem of predatory price cutting is pressing for solution is indicated by the attention being given to it by the manufacturing branches of both the drug and grocery trades. Also it is interesting to note that the methods now recommended do not demand arbitrary price fixing, but rather resale prices based on the actual cost of distributing the goods through the wholesale and retail channels. This is a far more intelligent approach to the problem and one that should result in real progress.

The one kind of competition that an independent retailer should fear is the sale of commodities below their actual cost or replacement value. This type of competition can not be met with anything except unlimited capital. It is not right that anyone with the necessary money should be allowed to destroy another's business in such an unsound, uneconomic method as giving money away until his competitor is broke. Such a state of trade is really nothing but piracy which should be corrected to the general benefit of business and the public.

It is not to be expected that the Capper-Kelly bill will pass the present Congress any more than it passed any other. In fact there is less chance today to pass a price-fixing bill than was a few years ago due to the poorly disorganized economic conditions. On other hand there should be an excellent chance of amending existing legislation in a manner which would make this legislation effective in eliminating unfair price cutting. Anything that would give promise of improving business conditions by eliminating unfair competition would most likely receive prompt attention

from the country's law makers. This the retail trade of the country should become aware of. For if such legislation could be passed, the disastrous conditions prevailing in retail channels would in the main disappear.

• • •

Profits and Sales

The financial reports of the pharmaceutical and proprietary manufacturing companies for the year just closed will indicate that, on the average, these companies have withstood the second year of the depression in a most admirable manner. As a matter of fact we could name a long list of these companies which have earned more during 1931 than in any year in their histories. It is quite evident, however, that some companies have gone backward both in earnings and sales, but the leading companies, for the most part, are reporting larger earnings on less sales.

The fact of the matter is that the sales curve of the industry has been particularly well maintained despite the economic depression and also despite the unseasonal weather which has been of such a nature as to cause less illness. However, the fact that medicines are necessities which will be bought in almost the same amounts during good times or bad, has caused manufacturers as a rule to hold their sales volumes up to about ten per cent. below the years before the depression.

The additional earnings resulting at the same time as sales decline, is due solely to the decline in raw material prices. Fortunately for drug trade manufacturers, the prices for finished pharmaceuticals and proprietaries are remaining quite firm. In fact manufacturers realize that price cuts of this nature would be most disastrous and they are unwilling to attempt to build up their volume to its former figures at the risk of such a condition. Furthermore, when manufacturers examine their profits and find that they are making more money on less volume they have no incentive to attempt to build up the volume at the probable expense of the profits.

• • •

Ten Years Ago

From our pages, January, 1922

The Hawaiian Board of Agriculture and Forestry has planted twenty acres of chaulmoogra trees near Waiahole, Island of Oahu, as a nucleus of a chaulmoogra oil producing plantation, setting out about 3,000 trees.

Colgate & Co., Jersey City, have purchased another plant at Montreal to enlarge their Canadian production. Manufacturing in Canada began Jan. 1.

Right to use the word "Aspirin" to be again contested in court. Bayer Company demands that Monsanto Chemical Works shall label drug only as acetylsalicylic acid.

• • • New and Non-Official • • •

Who's Going to Hold the Rats ?

Everybody has heard the story about the fellow who asked the above question when a friend told him that he could rid the barn of rats by putting a well-known rat poison in their holes.

A new story, to which the same inquiry might, with better logic, be made, is the one about the proprietary medicine manufacturer who has a phenolphthalein-orange juice preparation for which he claims vitamin as well as laxative properties. The Department claims it ain't so, but the manufacturer claims it is, and is defying the Department to try it on the rats and see for themselves.

• • •

Standardize 'Til It Hurts

While on the subject of Government departments, we note that the Department of Commerce in cahoots with the National Association of Stocking Manufacturers has decreed that henceforth and forever more the length of women's stockings shall be 30 inches—no more, no less. It's not so tough on the short girls—they can cut off the tops, but the tall girls can't very well cut off their legs.

It wouldn't have been quite so bad if they had standardized the foot length (maybe they will yet!) as cutting off a couple of toes is just a minor operation.

• • •

Wanted—A Packaging Expert

All the ballyhoo about packaging has made the corner fruit-dealer package conscious and he thinks that it would be quite within the province of some of the "experts" to design a banana with a zipper.

• • •

Now You Guess It

Our demon statistician informs us that the drug industry boasts the only company of any prominence which has more vice-presidents than the National City Bank and the National Broadcasting Co. In fact, he says that the company carrying the banner for the drug trade has only 3.1416 fewer vice-presidents than these two combined.

• • •

What a Break!

Chas. H. Phillips Chemical Co. offered a trip to Europe to the radio listener who could make the most three letter words out of "Phillips Milk of Magnesia," and the gentleman who won is in jail.

• • •

A Disgrace to Her Sex

There was some argument recently among the society leaders and business women of Philadelphia as to the proper status of cosmetics. Most of them argued that cosmetics are a necessity, but one disagreed on the grounds that "you can't make a necessity of something that most people can get along without."

By the same reasoning she could dispense with electricity and running water.

• • •

Out of the Red

Red ink, formerly selling at $1.50 a pint and $2.50 a quart has now been reduced to 75 cents and a dollar respectively. This is the best sign, yet observed, that the depression is broken.

• • •

The Booming Barber Supply Business

Consumption of hair tonic in the United States is reported to have increased almost 300 per cent. since the advent of prohibition.

Obviously, internal consumption.

Courtesy, Davis & Geck, Inc

Without Revision

Haly Abbas, who died in 994 A. D., was personal physician to the Sultan Adhaded-Daula Ben Buweik, to whom he dedicated his famous book, "el Maliki" or Royal book, which served as the medical and surgical authority for seven long centuries.

Intelligent Attacks on Predatory Price Cutting

Edward Plaut

Plans for controlling resale prices not only from the point of view of retailers, but also from the point of view of the public as well as the manufacturers are suggested from two sources. Agreement on one of these plans should be reached to bring order out of chaos.

A REAL healthy sign for those who appreciate from the viewpoint of manufacturers as well as retailers and wholesalers the evils of price competition in the retail drug trade is the fact that the better minds are now attempting to find a real way of correcting the situation so that all branches will benefit in a fair manner. Long has the subject been ignored and left to those who were interesting themselves actively in the Capper-Kelly bill as a means of correction. But largely because there has never been much chance of this measure becoming a law, no attempt was made to determine a more equitable means of correction, both from the point of view of all three branches of the drug trade, but from the point of view of the public and pure economics.

Prof. E. R. A. Seligman

Today solutions are offered which eliminate many of the evils which would be certain under the Capper-Kelly bill. These solutions come from two directions and there is a divergance of opinion between the two. However, it is likely that within a short time the manufacturing drug trade, as well as the manufacturing grocery trade will agree upon a method. Following this, the wholesale and retail drug and grocery trades will likely see the greater advantage of the method agreed upon by manufacturers.

Charles Wesley Dunn

Charles Wesley Dunn, counsel for the American Pharmaceutical Manufacturers' Association, Counsel

for the Associated Grocery Manufacturers of America, who criticized the Capper-Kelly bill a year ago, now presents a substitute method of correcting price-cutting evils. The basis of Mr. Dunn's method is the definite outlawing of the right of a seller to sell his goods at any price he pleases. Mr. Dunn would amend the Federal Trade Commission Act so as to make illegal the sale of merchandise below cost, or below cost plus a reasonable profit. Although Mr. Dunn is of the opinion that the act as at present constituted prevents the sale of merchandise below cost, due to the fact that some courts have failed to interpret the law in this manner, he would make certain of this application of the act by a further amendment.

Proposed Amendment

The amendment which Mr. Dunn proposes to Section 5 of the Federal Trade Commission Act is:

"That unfair price competition is hereby declared to an unfair method of competition, within the meaning of this section, and therefore is unlawful in commerce. The term 'unfair price competition,' as used in this section, means any price representation or any price cutting or any other price action, whether direct or indirect, in the competitive sale or offer to sell or advertisement of any article of merchandise in commerce, which is effective or has a dangerous tendency either (a) to mislead or deceive or in any way to wrongfully impose upon or prejudice the purchasing public, or (b) to unduly undermine or lessen or prevent competition or in any way to wrongfully injure a competitor or competitors, or (c) to create a monopoly in any line of business in commerce. The term 'unfair price competition,' as used in this section, does not mean any price reduction made in good faith for a legitimate merchandising reason or for a necessary or reasonable business purpose."

It would be necessary also, states Mr. Dunn, to have a like amendment passed by the states so that the same law would apply in intrastate commerce as would apply in interstate commerce.

In arriving at the conclusion that such an amendment is the manner in which the price demoralization should be ended, Mr. Dunn draws upon his wide experience as an attorney in cases involving price fixing by manufacturers. Mr. Dunn was attorney Colgate case in which the Supreme Court of the United States upheld the right of the manufacturer to refuse to sell. He was also counsel in the Beech-Nut case in which the Supreme Court by a five to four decision declared co-opération between a manufacturer and dealers in locating price cutters unlawful.

Mr. Dunn gives the following synopsis of the situation in his conclusions of his recent address before the Associated Grocery Manufacturers of America:

"It is clear that the state of price competition in ordinary merchandising which both business and the consuming public are interested to have and maintain is that which includes the free exercise of economic and fair price competition and excludes any exercise of uneconomic and unfair price competition. This is the ideal state of price competition for the progressive realization permitted in the circumstances.

"It is clear, on the one hand, that it is against the trade and public interest to have or permit any arbitrary interference with the free exercise of economic and fair price competition and consequent economic price reduction, whether by law or trade action. Economic price reduction is the normal and necessary consequence of the economic operation and development of the merchandising process if a business order of competition is the rule. In such an order the natural development of the art of manufacture and merchandising is toward the progressive attainment of a higher product value and distribution service and a lower individual business cost and price to the consumer. And the greater this development the greater is this attainment. This economic trend toward economic price reduction will go as far and as fast as the attending circumstances permit, in the different lines or branches of industry and with respect to the different members of it. How far and how fast it will go is finally an individual problem, the solution of which depends upon the condition of individual opportunity and permitting its realization.

In the Public Interest

"It is clear, on the other hand, that it is equally in the trade and public interest to have and permit proper and effective trade action in the prevention of uneconomic price competition which is subversive of sound business and to outlaw unfair price competition which is a wrongful subversion of business conduct and to permit public and proper trade action in prevention of it. Such competition involves the abuse of freedom of competition and is an incident of its exercise. In a merchandising sense unfair price competition principally arises out of the economic importance of price reduction and the consequent emphasis upon it; out of the increased price competition which has followed the large economic development of modern business; out of the intense competition of modern business because of the great and increasing concentration in it.

"If, therefore, the case of a drug or grocery manufacturer is considered in the light of these general observations and with respect to resale price action by him the following conclusions are indicated. On the one hand, he should not interfere in any way with economic and fair price competition and reduction in the resale of this article, due to the economic working of the merchandising process in grocery distribution and consequent economic price distinction. He cannot do so consistently with his merchandising obligation to the consuming public and if he has due regard for his future. For him to attempt such interference and to fix and enforce a resale price excessive as to the more efficient dealers and, therefore, enhanced as to

the public purchasing from them is influential to induce such dealers to favor or substitute a similar article of another or their own origin which they can freely sell at the lower price permitted by their lower cost of doing business, and thus to divert consumer patronage. On the other hand, the manufacturer should aggressively take whatever action is available to him to prevent uneconomic and unfair price competition in the resale of his article. This because he is morally obligated to take such action, in the public interest and to protect the dealers upon whom he relies for distribution and who are in effect his partners in a common business enterprise. This because he cannot hope to build a permanently successful and increasing business upon the basis of uneconomic and unfair price competition in the resale of his article, in the long view and by reason of the increasing economic development and dealer organization of grocery distribution. Such a business plainly must be based upon economic and fair resale price competition, in that view and for that reason and regardless of whatever may have been the situation in the past. What preventive action the manufacturer can take has been stated. In short, from the standpoint of public policy and economics the manufacturer's resale price policy should be directed not to arbitrarily fix and enforce a resale price but rather to prevent uneconomic and unfair price competition in resale. This distinction in policy is fundamental and necessary for a proper relationship between the manufacturing industry and the distributing trade, in a basic and ultimate conception.

Outlaw Unfair Competition

"Hence. it follows that the resale price legislation which the grocery manufacturing industry and distributing trade should support, if any, is not that which is purposed and effective to enable and induce the manufacturer to arbitrarily fix and enforce a uniform resale price, but rather that which is limited to outlaw unfair price competition, duly defined, and expressly to empower government action and impliedly to authorize proper trade action, in prevention of it. What the form of this legislation should be, I have stated. Such legislation of course is not an absolute remedy against unfair price competition. At most it is but a valuable remedy for use. But its great value is that it makes fair price competition the public policy of the land and the legal rule of trade; that it is the necessary and firm foundation upon which to build sound trade opinion and practice as to price competition, which constitute the ultimate remedy against unfair and uneconomic price competition.

"In short, the interests of the grocery manufacturing industry and distributing trade are identical as to any resale price legislation, since they are governed by the same considerations of public policy, economics and equity. Therefore, the two branches should not be divided or antagonists as to the form of such legislation. And this is the unfortunate situation now existing, with one branch in large part advocating legislation to validate resale price fixing contracts and the other branch opposing such legislation. There must be a common ground of sound legislation upon which they can both stand. And it is in the hope of uniting both branches for the enactment of sound legislation against unfair price competition that I have undertaken to define such legislation in this address. It is first and simply an amendment of the Federal Trade Commission Act to expressly include and outlaw unfair price competition, as defined. It is second and simply a similar amendment in effect of each state antitrust law. Such an amendment upon its face is in the trade and public interest. And, in my opinion, it will do more than anything else to promote sound trade opinion and practice as to price competition, which is the result sought and desired."

Seligman Report

But still another suggestion comes as the result of the survey of "Price Cutting and Price Maintenance" undertaken a year ago by Professor Edwin R. A. Seligman of Columbia University at the behest of Edward Plaut, president of Lehn & Fink, Inc. and chairman of the committee of the New York Board of Trade to study the subject. This report was made public at a dinner at Washington, January 7th.

The report recommends legislation to remove any existing barriers against the refusal-to-sell method of enforcing price maintenance, and adds that machinery be set up for business men, similar to the trade practice conferences sponsored by the Federal Trade Commission, to work out practices that would make price maintenance more generally effective than the refusal-to-sell method alone.

"The definite conclusion is that the general principle of resale-price maintenance is legitimate," the report says. "The type of price-cutting studied is a form of unfair competition; price maintenance is a step toward fair competition. It is economically defensible and therefore ethically desirable. The adoption of resale-price maintenance as a general principle will mean, on the whole, a step forward in American business life."

"A generation ago," says the report, "price maintenance was as normal and legal as it still is in almost all other countries today." Discussing the legitimacy of price-cutting, "it is undoubted that certain forms of price-cutting, however lucrative to the price-cutter, are to be characterized as economically injurious and ethically indefensible." Other forms are advantageous even to those not beneficiaries of the practice. Remnant sales, clearance sales, bankrupt sales and the like, if honestly carried out and free from subterfuge, are well nigh necessary concomitants of modern business. Other cut prices, such as the price variations

in railroad tickets, are innocuous and of benefit to the public."

"Practices which were more or less bearable during the period of prosperity were felt as unbearable during the hard times, especially in view of the fact that business rivalry has come more and more to assume the character of cut-throat competition. Some of the price-cutters themselves have become doubtful as to the wisdom of their policies, and the controversy as to the distinction between fair and unfair competition has flared up anew."

"Like any other widespread economic practice, price-cutting possesses elements of good and of evil. Some forms are in accord with tactics of fair competition; other forms constitute unfair or cut-throat competition. While the latter must be corrected, the former must by no means be eliminated."

The report proceeds to analyze the benefits and evils of price-cutting. It says that "if it is true, as we have seen, that price maintenance cannot be expected to insure uniformly high profits to all retailers, or to abolish all forms of price-cutting, it necessarily follows that price maintenance will, at the same time, fail to impose higher prices upon the consumer."

Over-Optimism Unwarranted

A warning against over-optimism appears in the statement: "enthusiastic proponents of price maintenance are wont to depict in glowing colors the rejuvenated business which would come to all retailers, where the margins of profit would be satisfactory and price-cutting would cease to exist. There are, in fact, no less than four reasons why this much anticipated retailer heaven would not come about:

1. Lack of universal adoption by manufacturers.
2. Inability of retailers to compel adoption.
3. The existence of cut prices on price maintained items.
4. Price-cutting on non-maintained items."

Price-cutting, used to attract customers and thereby increase the sale of other products, lies at the basis of price maintenance and constitutes the main body of the report.

The report states that "it will not be difficult to frame a bill designed to realize the principle" underlying the problem of unauthorized selling, and pays special attention to the jobber method of distribution by stating that it is possible that an additional measure legalizing what might be called "distribution-controlled contracts" may be needed.

"Such agreements would apply only to the procedure involved in withholding supplies," the report reads. "They would not cover agreements as to resale-prices by the wholesalers. The salient point here would refer to the manufacturer's agreement to refuse to sell to price cutters, as determined either by information which he would declare himself ready to obtain or by the manufacturer's lists furnished to the wholesalers. If the court decisions continue to be unfavorable to the machinery of the refusal-to-sell method, the obstacle might be removed by a general clause in the law covering the above points.

"The bill should declare it unfair and illegal for any distributor to buy or to resell or otherwise to dispose of trade-marked or identifiable goods after the owner of the trade name or his licensee has by written notice informed the distributor first, that supplies are to be withheld from him, and second, that the owner of the trade name prohibits the buying and the selling of the goods in question.

Civil Remedy Desired

"In view of the fact that the proposed adjustment is designed for the protection of a property right, the remedy should be civil and not penal. The manufacturer himself should be held to institute the proceedings and to bear the administrative burden. Inasmuch, however, as the values at issue are intangible, the manufacturer should not be compelled to furnish proof of the absolute extent of his injury. On the contrary, what seems to be called for is the grant of liquidated damages, characteristic of remedies commonly available to protect intangible interests in other fields. Minimum liquidated damages of $500 would in all probability suffice to make effective the purpose of the law.

"The intent of the law should be to cover future sales of goods repurchased in violation of the manufacturer's refusal to sell. The Law should accordingly avoid operating as a handicap on the disposal of goods already at hand. A satisfactory means of attaining this end seems to be to make the remedy outlined above contingent either upon a reasonable allowance of time within which the distributor could dispose of stocks on hand, or upon a direct offer by the manufacturer to repurchase stocks in actual possession of the retailer at the highest figure quoted by the manufacturer during three months prior to the date of refusal to sell.

"In order to render the prohibition against unauthorized sales effective, action will probably be required by both state and federal legislation. This is true unless, indeed, the federal courts should expand the concept of interstate commerce beyond its present scope. Two considerations might be advanced in favor of such an expansion: first, owing to the intangible nature of the interest involved, it is perhaps reasonable to contend that this interest extends beyond state boundaries, and is not to be considered as having a situs in any one particular locality. Secondly, the mere fact that the actions of a distributor in one state impose a burden on a manufacturer in another state, shows that interstate commerce is affected, and the removal of this obstruction to commerce would offer a proper field for activity under federal auspices."

Charles Wesley Dunn makes the following comments on Professor Seligman's report:

"I have read Professor Seligman's report only in digest form. Apparently his recommended remedy

(Continued on page 26)

More Stringent Regulatory Work?

Proposed amendments to the Food and Drug Act, and plans of the Food and Drug Administration would work a hardship on the drug manufacturing industry, while proving of very doubtful public benefit.

QUESTIONS regarding not only the present attitude of enforcement officials of the Food and Drug Administration regarding enforcement of the Food and Drugs Act, but also regarding changes in the method of enforcement, as well as an amendment to the act sought by the Administration, are causing serious concern to drug manufacturers in general.

Perhaps the one matter which has received more serious attention from the drug manufacturing industry up to the present time is the amendment proposed by Director Campbell to section 7 of the act, which amendment would seek to prohibit the sale of products which do not meet the requirements of the U. S. P. or N. F., even though the variation of a product from the official standard is plainly stated on the label. The fact that this problem has received more attention than have some other problems, is due to the fact that it has been before the trade for some six weeks, and also because of the fact that the harm resulting from it is immediately visible, not only from the point of view of the trade, but also from the point of view of the public as well as of the medical profession.

The amendment to the Food and Drugs Act proposes to change section 7, which section of the act specifically provides for legitimate traffic in drug products which differ from the standards of the U. S. P. and N. F. when the standard of strength, quality or purity is plainly stated on the label. Director Campbell would amend this section so as to prohibit altogether the legitimate sale of products which differ from the standards of the U. S. P. and N. F. However, there are two points of difference from the U. S. P. and N. F. which Director Campbell would not include in the amendment. One of these is that he would permit importation of crude drugs which might differ. Also he would not attempt to prohibit such products as might represent improvements over the specifications laid down as standard.

Just how such an amendment could be worded to prevent low grade products from being legally marketed at the same time as it would permit free trade in improved products is something that appears most difficult to figure out. In fact reputable manufacturers in the trade who are constantly attempting to improve the quality of their products so as to produce them in a form superior to the official standards, are very much opposed to amendment of the act in this manner because they fear that such an amendment would seriously affect the progress of the drug manufacturing industry.

It seems certain that if the amendment should permit only "improved" products to differ from the official standards, the determination of whether or not a product was an "improved" one would be a matter of opinion on the part of department officials. Naturally any such condition as this would be intolerable, as it would increase the scope of arbitrary decisions of department officials on subjects about which their knowledge is bound to be limited, in the opinion of the drug trade. Department officials can not know as much about every particular product as those men in manufacturing houses whose work it is to concentrate upon only one or a few of these products, say trade representatives.

The need for deviations from the official standards has been clearly demonstrated in many instances, say drug trade officials. One particular case in point is that of aloin. One of the requirements of the eighth revision of the U. S. P. under the monograph on aloin was as follows: "When ignited, it is consumed without leaving a residue." This was in fact an absurd situation, as a requirement for aloin, it is said, as it must be evident to anyone who had experience in chemistry that it is impossible to ash a substance so that it will leave no residue.

Manufacturers of aloin found after ashing aloin, that there was left a residue which was weighable. Accordingly, the only way in which any manufacturer could sell aloin under the eighth revision of the U.S.P. was to prepare a label stating that the aloin in the package differed from the U. S. P. in that it gave an ash content of two per cent.

The question now arises just what the Food and Drug Administration would or could have done under this condition if an amendment to the Food and Drugs Act such as Director Campbell now proposes had been then in effect. It is the opinion in the trade that no manufacturer would have been allowed to sell aloin, and consequently there would have been none available for the medical profession or the public. This would have resulted in taking off the market not only aloin itself, but also the many products in the U. S. P. and N. F. which contain aloin in their formulas. The only way in which the situation could have been relieved before the U. S. P. IX appeared with a corrected monograph, was to have had the U. S. P. revision committee make an interin revision in this particular monograph. A manufacturer states that the Administration would hardly be justified in allowing such an aloin to be marketed with the U. S. P. specifying no ash. Surely, says an aloin manufacturer, it does not seem reasonable that the Administration could allow the sale of this aloin as an "improved" product, since any ash at all would be considered inferior if no ash is specified.

Drug Makers Sympathetic

The drug manufacturers generally admire and are in sympathy with Mr. Campbell's attempt to prohibit the sale of those products which are below standard. Leading manufacturers have no desire to promote the sale of these products since they compete in a very unfavorable manner with the better products. But manufacturers generally believe that the proposed amendment to the act can not be worded in any manner which will protect the trade and public from inferior products at the same time as it will leave a way out for those products which must be marketed to a standard different from the U. S. P. It is stated that many products are marketed by reputable manufacturers in a form which the manufacturers and physicians consider "improved," but which others may consider inferior to the U. S. P. Thus Fluidextract Cascara Sagrada is marketed which several percentages of alcohol other than the percentage specified in the U. S. P. X.

The main objection which Mr. Campbell is said to have to present conditions is the fact that a pharmacist might purchase products which differ from the U. S. P. or N. F. requirements and dispense them as official products on prescriptions. The pharmacist would do this because he would have them on the shelf and would reach for them unintentionally. Such dispensing is admittedly wrong in the case of products which differ from the U. S. P. and N. F. either because they are truly "improved" products, or because they are merely different from the official products for the reason that they can then be sold at a cheaper price.

Another major problem facing the industry from the point of view of drug control lies in the report that the Food and Drug Administration is to work out a plan by means of which the Administration will permit manufacturers to place upon labels of ethical preparations the names of diseases which can not appear upon labels of products which are sold to the public. These will be names of diseases for which there are (in the opinion of the Food and Drug Administration) no drug products which constitute satisfactory methods of treatment. However, the physician does use medicines in treating these diseases. Therefore, the Administration plans to allow manufacturers to inform physicians as to what products they should use in the treatment of these diseases.

That this proposal will precipitate a real row between the manufacturers and the Administration appears certain. Drug manufacturers—particularly the proprietary manufacturers—have long been intensely bitter toward the Food and Drug Administration because of the Administration's ruling against the use of very many disease names on labels of proprietary medicines. Many of these proprietaries are of the exact composition as prescriptions written by physicians for diseases whose names the Administration will not permit on the labels of the same proprietaries. Manufacturers feel very strongly that the Administration has not been fair in the matter of label statements, and that the Administration has gone far beyond the letter and spirit of the law in its enforcement. The proposal to use statements which will be intelligible to the medical profession but unintelligible to the laity is taken as a further indication of the Administration's enforcement of the law in a manner which will disregard the rights not only of manufacturers under the law, but also of the public to the commercial advantage of the medical profession.

A Fight to the Finish

There seems to be very little doubt that such a step would result in an immediate law suit against the Administration, which suit would be carried to the highest court by the trade. The move in this direction would force the drug manufacturing industry to open the whole matter of disease names on labels and fight it to a finish, it is said, for the reason that such a step would doubtless encourage the Administration to add to the list of disease names prohibited on labels of products intended for use by the laity.

One manufacturer stresses the fact that there is no point of public health involved when the Administration allows the name of a disease to appear on a label of a product in such a manner that the average layman can not read it. This is merely a matter of competition, he claims, between the drug manufacturers on the one hand and the physicians on the other. It is merely a case of the Administration being unconsciously lead into the position of enforcing the law in a manner which works to the commercial advantage of the physician, and to the commercial disadvantage of the drug manufacturer. If the Administration is to follow the physicians entirely, says this manufacturer, a biased and unfair enforcement of the law is bound to result. Furthermore, he continues, the

Latin Names

ALTHOUGH Drug Markets obtained from what it believed to be a reliable source, the report that the Food and Drug Administration, on labels of ethical preparations, was to permit the use in Latin of names of diseases for which, in the opinion of the Administration, there are no specific cures by means of drugs alone, Dr. Frederick J. Cullen, chief of the Drug Control, denies the report.

However, Dr. Cullen refuses to explain just what his plan is to prevent understanding of label statements on ethical preparations should these products fall into the hands of the laity. It was indicated by Dr. Cullen recently in his talk before the American Pharmaceutical Manufacturers' Association that he had some such plan in mind. This plan was understood to mean that ethical preparations which physicians use for the treatment of diseases (although in fact the physicians may only be treating symptoms, or attendant conditions of the diseases in question) would be allowed to convey to the physicians on the packages the information regarding the use of the products in these diseases. It was thought that the means of accomplishing this was to be by means of the Latin names of the diseases. However, Dr. Cullen denies that this is the method to be used.

Supreme Court of the United States has ruled in the Raladam case that no competition can exist between a manufacturer and the medical profession, since a profession is not a trade and therefore is not subject to competition.

The drug trade is also confronted by a plan to attach two important amendments to the food and drugs law, both proposed to be incorporated in Senator Copeland's bill providing for the control of false advertising of drugs. With that proposition, the plan contemplates the coupling of a provision for a Board of Review to consider cases arising under the food and drugs law.

Senator Copeland is quoted as saying that he has assurances that important elements in the drug trade will support his plan for advertising control, provided provision is made for a Board of Review. According to some statements, such support would come from the drug trade in New York. According to other reports, it would come from the entire trade. The exact identity of the elements or interests that will support the joint amendment plan could not be ascertained in Washington.

However, Senator Copeland said that drug trade people were drafting an amendment to provide for a board of review and that the same would be submitted to him. Upon its receipt, he said, he would incorporate it in his bill for drug ad control, and would then press the double-barreled measure for action by this Congress.

Reports concerning trade support for the Copeland proposition were surprising to trade representatives in Washington. Several of them, identified with the American Drug Manufacturers' Association, the Proprietary Association, and others, have made no secret of the fact that they are opposed both to the ad control plan and the board of review proposal, but particularly the latter.

At one time, perhaps, the idea of a board of review was looked upon with more favor, but during the past year or so, the opposition to it has grown in trade circles.

It has been an open secret that officials of the Department of Agriculture have also opposed the board of review idea. Officers of the Food and Drug Administration have not hesitated to voice that opposition on various occasions.

At the same time, however, department officials have flirted with the ad control idea. The Copeland bill, in the last Congress, which was the same as the one pending in this Congress, was endorsed by Secretary of Agriculture Hyde, with the suggestion, however, that some changes should be made in it. Walter G. Campbell and Dr. P. B. Dunbar of the Food and Drug Administration have repeatedly stated that they thought something would have to be done to secure ad control.

Just what would be the attitude of department officials on the proposed combination Copeland bill, providing for ad control and a board of review, remains to be seen. Officials said they would like to see the bill, in amended form, before expressing any opinion about it.

Meanwhile, speculation continued as to the source of reported trade support for the to-be-amended Copeland bill. It is recalled that a New York group has been boosting the board of review idea. That idea also received attention and some support, according to report, at the convention last year of the United Medicine Manufacturers' Association. Persons identified with another manufacturing group are also reported as favorably inclined towards provision for a board of review.

Naturally, trade attitude might be affected somewhat by the particular form which a plan for a board of review may take, the personnel of such a board, whether it would include trade or industrial representatives or would be made up wholly of Department of Agriculture officials. However, the majority opinion as voiced in trade circles at the national

capital has been "thumbs down" on any such proposition.

Clinton H. Robb, counsel for the United Medicine Manufacturers' Association, is an exception. He talked with Drug Markets' representative as follows:

"I would be inclined to favor an amendment of the food and drugs act to extend to collateral advertising, providing that Congress also created a board of review to deal with cases arising under the act. I would not want to speak for the United Medicine Manufacturers' Association, however, nor for any other trade groups. I am not drafting a bill or amendment and do not know who in the trade is, if anybody. I am not necessarily in favor of the Copeland ad control bill, either with or without an amendment providing for a board of review.

"I believe that the hands of the federal government will be strengthened with respect to collateral advertising. The only question is whether the power will be given to the Federal Trade Commission, in plain language, or whether there will be an amendment of the food and drugs act. The Commission would like to have the matter settled and all doubt removed as to its power. But I am inclined to think that eventually Congress will amend the food and drugs act by extending that statute over advertising outside the package.

"If the federal government is to exercise power over general advertising of drugs, I am inclined to think it would be better to have that power in the same department that handles advertising on labels and in packages, rather than to have the power over advertising scattered as it is now, between different branches of the government. It would be better to amend the food and drugs act than to confirm and amplify the power of the Trade Commission.

"However, this is not an association policy. The manufacturer feels that he has enough troubles. Unfortunately a few manufacturers have made extravagant claims in newspapers and periodicals. When they threw discretion to the winds and made all sorts of wild claims, they antagonized Congress and made trouble for manufacturers who obey the law in spirit as well as letter.

"It would be better for the industry to modify the food and drugs act so as to give the Department of Agriculture jurisdiction over collateral advertising than to have such control accomplished by other means."

Attacks on Price Cutting

(*Continued from page 22*)

against unfair resale price cutting is the amendment of the federal antitrust law to legalize the right of the manufacturer to refuse sale to price cutters and/or to dealers who sell price cutters, to the extent its exercise is now restrained by that law.

"The present federal law in point is briefly this: in the *Colgate* case (250 U. S. 300) the Supreme Court held that the Sherman Antitrust Act does not prohibit a manufacturer from refusing sale to any one, e.g., to dealers who do not charge his suggested resale price. In the *Beech-Nut* case (257 U. S. 441) the Supreme Court held that the supplemental Federal Trade Commission Act prohibits a manufacturer from exercising the aforesaid policy of refusing sale to price cutters by means which involve his cooperation with his dealers to maintain his suggested resale price. Such illegal means include the interreporting of price cutters, their enrollment as undesirable customers until they give a satisfactory resale price assurance, etc. I am familiar with both cases, since I was counsel for the defense in each. Hence what Professor Seligman apparently recommends is an amendment of the Commission Act to expressly validate the cooperative means to maintain a resale price, condemned in the *Beech-Nut* case.

"My first comment upon this recommendation is that it will be impossible, in my opinion, to induce Congress to enact legislation affirmatively approving what the Supreme Court condemned in the *Beech-Nut* case. I see no reasonable prospect of the enactment of any federal legislation directed to affirmatively validate resale price maintenance by named means. On the other hand there is a reasonable prospect of inducing the Supreme Court to reverse the *Beech-Nut* decision upon its review in another and similar case, upon purely legal grounds. That decision was by a 5 to 4 vote and the present personnel of the court indicates a reversal.

"My second comment is that if he is careful the manufacturer can now effectively exercise the refusal-to-sell right validated by the *Colgate* case, without offending the decision in the *Beech-Nut* case. The difficulty is more that he fails to exercise that right.

"My third comment is that this recommended legislation is plainly not the comprehensive remedy against unfair price cutting required in the circumstances. That remedy is first federal and state legislation outlawing unfair price competition, whereby fair price competition is made the legal rule of trade. There is reasonable prospect of enacting such legislation. At the present time a trader has the right (subject to incidental exception) to sell at any price. And the unfair trader stands on that right. The only effective way legally to reach him is through such legislation. That remedy is second the active exercise by the manufacturer of the legal right of preventive action against unfair price competition in the resale of his article which he now has. I have elsewhere outlined what this available action is. That remedy is third merchandising discrimination by the retailer, whereby he promotes the sale only of products which return a fair profit to him. His power of such merchandising discrimination is large, if he will exercise it. And his exercise of it will compel the manufacturer to do his part, if he wants to keep his business and the good-will of his retailers."

French Mimosa

By a Special Correspondent

Mimosa Tree near Grasse

AMONG the flowers constituting the riches of the Riviera section of Southern France, including the Grasse region, is the mimosa, which is eagerly sought after by the distilling perfumer and the cut flower trade, although it must be admitted that the larger proportion of mimosa grown is purchased by florists. A large quantity of mimosa goes to Paris, England and Belgium, where this delightful yellow flower is sold separately in bouquets, or used to dress up other flowers. The distilling perfumer also takes his share of the mimosa, as a steady market exists for essential oil of mimosa, which is obtained from various varieties of mimosa, a kind of acacia, including the *Floribunda*, *Dealbata*, L.

Mimosa perfume and bouquets are very popular in France, one firm putting out a bottle that bears a label wholly covered with the yellow flower of the mimosa. This particular brand of perfume enjoys wide sale among the French women, and practically every American woman tourist visiting Grasse brings back with her a bottle of this mimosa scent. There is something appealing in the mimosa fragrance, and women who use it become accustomed to it in a manner to make them want it around constantly, in addition to other perfumes. Recently an excellent mimosa eau de cologne and toilet water has made its appearance in Paris, and this item is beginning to show a good sale for those stocking it.

The mimosa flower itself is attractive in color, thus lending itself to reproduction on the label. Such reproduction, when properly done, almost sells the perfume, thus making for a point of sale argument that can not be beaten. In Paris a number of the perfume shops display the actual mimosa flower in season together with the bottles of perfume, bearing on their labels a life-size likeness of the very flower being shown. This combination of flower and perfume has been found to be an excellent one. It sells perfumes.

The *Mimosa Dealbata* is the one most used by the distilling perfumer, and practically every garden in Southern France contains some of it. In the Alpes-Maritimes department, where the city of Grasse is located, the mimosa grows particularly well. This *Dealbata* variety is produced through grafting onto another species, the *Mimosa melinoxilum*, although the results achieved are not always those desired by the growers.

In addition to the *Dealbata*, there are the *Monteana*, *Pendula*, sometimes called the *Dealbata* also, as well as the *Floribunda*, already mentioned. Mimosa growing on a large scale was commenced in 1842, and the mimosa is cultivated at the present time within the regions of Cannes, Pégomas, Golfe-Juan, Tanneron and Mandelieu, covering an area of some 1,500 hectares.

The mimosa blossoms all the way from October to last of April, a number of the varieties having been

forced into blossoming time through experimentation carried on by experts. These experiments, which have been successful in a number of instances, have made the mimosa a decided factor in the wealth of the entire Mediterranean region of Southern France. Naturally these experiments have brought in their train a long list of improved species, which would not be of great interest to the reader.

Seeding is the method most used in the growing of mimosa, although many of the plants obtained from the same seeds do not always produce identical flowers when the blossoming time arrives. Slips or cuttings can not be successfully used in connection with the mimosa. The only method that is successful in connection with the production of the elite varieties is that of grafting, already mentioned above. This grafting is carried on during the period extending from June to August, when all vegetation is at its height.

Care of the mimosa is not complicated, making it a favorite among the growers in Southern France. However, the watering problem must be taken into consideration, as the mimosa demands a certain amount of moisture. Several maladies and insects attack the mimosa, although they have been combatted very successfully. The greatest enemy of the mimosa is the cold, and the trade well remembers that in February 1929 the unusually severe winter weather which hit the South of France damaged a great many of the mimosa plantations. This year the cold has also retarded the mimosa somewhat, as the cold wave of the past month was quite severe in Southern France.

According to Piesse, Messrs. Roure-Bertrand Fils were the first distilling perfumers to use the mimosa industrially, due to the penetrating, yet so agreeable, fragrance of the mimosa flower. Flowering of the mimosa gives one the illusion that springtime follows the autumn directly on the Côte d'Azur.

Treatment of the mimosa flower requires equipment that is fairly involved, the methods used being that of hot maceration, or volatile solvents, depending upon the individual case. The gathering presents difficulties that are hard to overcome, for the reason that a gust of strong wind can come along and completely denude a mimosa shrub or tree. Furthermore, the cost of gathering and sorting is high, making it a flower that does not rank, of course, with the May rose or the jasmine, for example. The nominal quotation for mimosa concrete in France is given as about 1,000 francs ($40) per kilogram. This price in 1929 was 900 francs ($36) per kilogram. Gathering of the distilling perfumers begins, as a rule, during the early part of February. If another cold wave sets in, the price of the concrete is bound to see an increase.

For those desiring several items of artificial mimosa perfumes, containing, of course, the natural essence or essential oil of mimosa, the following formulae are suggested:

Mimosa I

Terpineol	400	cc.
Linalol	250	cc.
Methylacetophenone	100	cc.
Narcissus, essential oil of	50	cc.
Mimosa, natural essential oil of (absolute)	125	cc.
Ylang-ylang, natural essential oil of	20	cc.
Isoeugenol	15	gr.
Alcohol C_8 Octyl	10	gr.
Amyl cinnamic aldehyde	5	gr.
Anisic aldehyde	23	gr.
Phenylacetic aldehyde	2	gr.

Mimosa II

Methylacetophenone	50	cc.
Linalol	150	cc.
Terpineol	65	cc.
Ylang-ylang, natural essential oil of	10	cc.
Neroli, natural essential oil of	25	cc.
Jonquil, natural essential oil of	10	cc.
Mimosa, natural essential oil of (absolute)	105	cc.
Isoeugenol	8	gr.
Anisic aldehyde	25	gr.
Phenylacetic aldehyde	2.5	gr.
Aldehyde C^{12}	1	gr.
Aldehyde C^9	3.5	gr.
Alcohol C^9	10	gr.
Orris resinoid	40	gr.

Mimosa III

Methylacetophenone	75	cc.
Linalol	250	cc.
Lemon, essential oil of	100	cc.
Bitter almond, essential oil of	25	cc.
Ylang-ylang, essential oil of	150	cc.
Mimosa, essential oil of	275	cc.
Isoeugenol	25	gr.
Anisic aldehyde	60	gr.
Amyl cinnamic aldehyde	10	gr.
Orris or tonka resinoid	30	gr.

The following formula for a bouquet mimosa is suggested:

Muskseeds, infusion of	25	cc.
Castoreum, infusion of	10	cc.
Tolu, infusion of	10	cc.
Civet, natural, infusion of	10	cc.
Civet, artificial, solution of	15	cc.
Musk ambrette at 1%, solution of	10	cc.
Jasmine, extract (flower pomade) No. 36	250	cc.
Mimosa, extract (flower pomade) No. 72	450	cc.
Jonquil, extract (flower pomade) No. 36	75	cc.
Rose, extract (flower pomade) No. 36	50	cc.
Orange flower, bigarade, (flower pomade) No. 36	100	cc.
Jasmine, natural essential oil of	5	cc.
Narcissus, natural essential oil of	2.5	cc.
Neroli, natural essential oil of	1.5	cc.
Ylang-ylang, natural essential oil of	5	cc.

(*Continued on page 34*)

The Drug Trade in Depression

The volume of drug products has held more nearly on an even plane than the volume of any other industry. Combined with this is the fact that many companies are reporting their highest earnings for the past year.

"AFTER holding at relatively satisfactory levels throughout the greater part of 1931, sales of drugs and medicines recently have undergone more decided recession, says Standard Statistics Company under date of January 2, 1932. However, this decline is attributable to nature, rather than to economic conditions, says the report: "Because of the necessitous character of these products, the decline may be attributed primarily to unseasonally warm weather conditions." But even this recession will not very greatly affect manufacturers, says the report: "Through lower raw materials costs and close control over expenses, however, the decrease in producers' earnings has been less pronounced than the contraction in sales. Volume of sales during the near term, obviously, will depend principally on public health conditions, an unpredictable factor. Nevertheless, assuming relatively normal weather for the remainder of the winter, producers' returns for this period should display some improvement over results for the similar months of 1930-1931. Indications are that leading units in the trade will experience a profits contraction of not more than ten per cent., as compared with the like 1931 interval."

Going further into the approximate volume of business and earnings to be expected of the drug manufacturing industry, the report says:

"Records of the Federal Reserve banks for October showed a decrease of 17.7 per cent. in wholesale drug sales, as compared with October of the year before; trade reports indicate a continuance of this trend through November.

"Obviously, the early future outlook for drug sales is dependent principally on the elements, which are a vital factor in determining the state of public health. A near term forecast, then is quite tentative. Nevertheless, it is our belief that consumption of preprietary remedies in immediately future months will make a somewhat more favorable comparison with last year. Weather conditions recently have assumed more seasonal tendencies, and the gradual expansion in medicine sales apparent in recent weeks is likely to continue through the initial quarter of 1932. We estimate that the aggregate volume of drug sales during the current three months will be little more than 10 per cent. below the relatively favorable levels of the comparable months of 1931.

"It is evident that the drug and medicine trade has been one of the most favorably situated lines throughout the current depression. Few industries have experienced a more moderate profits contraction. Effects of the recession in dollar volume of business have been largely offset by the institution of operating economies, and more particularly by lower raw material costs. The net result of these savings is reflected in earnings of this industry for the nine months ended September 30, last. During this interval, profits of reporting companies receded only 5 per cent., as compared with returns for the like 1930 period. Because of the less favorable volume in the final quarter, probabilities that the recession in income has been somewhat broader. Nevertheless, full year 1931 returns of the trade are believed to have declined by no more than 10 per cent., at the most.

"The maintenance of advertising expenditures by this industry is noteworthy. Spending about 30 per cent. of gross sales for publicity purposes, it is evident that only relatively moderate reductions in this account would offset a considerable loss of operating revenue. Managements generally have resisted the temptation of bolstering returns by this method, however, and in many instances appropriations have been increased. Disbursements of this nature for the trade, based on magazine and radio contracts for the

eleven months ending November, 30 1931, actually showed a slight increase, as compared with the like period a year earlier. Individual contacts with representative organizations in this field, moreover, reveal that no important curtailment in advertising appropriations is in immediate prospect.

"Indications are that profits will continue to be relatively well maintained during the initial quarter of 1932. Drugs and medicines may be regarded as necessities, and aggregate consumption of these products is unlikely to recede materially. Prices have not escaped current deflationary tendencies, but most branches of the trade have not experienced the price demoralization existing in many other lines. Thus, indications of satisfactory sales and relatively firm prices forecast that the first quarter returns of leading concerns in this field will recede less than 10 per cent., as compared with the initial three months of 1931. Equally favorable results after that period may be contingent to a slight extent, at least, on proposed legislation now pending.

Legislative Outlook

"The proposed Capper-Kelly Act, a measure to legalize price maintenance contracts between vendor and vendee, again has been introduced at the current session of Congress. The drug trade is especially interested in this bill, but is at considerable variance regarding the efficacy of the act in relieving price cutting ills. It is our belief that the alleged benefits of this act to the industry are dubious, and that enactment of such legislation may foster the production of "bootleg" merchandise, thereby defeating, to a large extent, the other advantages received. Opinions regarding the final passage of the bill vary widely; however, the present is regarded as an unpropitious time for the introduction of any measures of a price fixing nature, and current advices indicate that the proposal has only slight possibilities of becoming a law.

"In addition to this and other proposals, such as advertising control and amendments to the Food and Drugs Act, the measures of transcending importance to this trade are the proposed sales taxes. Such measures are among the most popular of proposed revenue acts in both governmental and state legislatures. Considerable doubt exists regarding the enactment of a general sales impost, but it is possible that selective taxes on so-called luxury items may be enacted. In the majority of these proposals, cosmetics, perfumes and toiletries are listed. Additional apprehension arises from the possibility that other products, including dentifrices, may be included in these categories under legal interpretation.

"Representations already made favor a 10 per cent. tax on these items. An impost of this amount would interfere only slightly with sales, but the tax probably would be applied at the source. Hence, in the repricing of products, manufacturers might be inclined, in view of the generous profits obtained, to absorb at least part of the levy. Some recession in producers' returns, therefore, is possible if this legislation is secured. Final action on these measures, however, is unlikely for several months.

Toilet Preparations

"Sales of cosmetics, perfumes and powders continue to recede slightly, but aggregate consumption of these products has been relatively well sustained. Nevertheless, an increasing portion of sales is being accounted for by private brands. Thus, total volume of the leading manufacturers has undergone considerable recession. In certain instances, moreover, this trend has been emphasized by the more pronounced consumer shift to the lower priced products. Some producers of the less expensive lines have benefited from this consumer swing, to the extent that competition from private brands has been more than offset. In the majority of instances, however, both sales and earnings have been reduced materially.

"Long term prospects vary widely for individual companies in this division. Generalized conclusions relative to the different manufacturing organizations are precluded by the constant variations in brand preference on the part of consumers. For this reason, earnings of cosmetic makers are likely to show extreme fluctuations over an extended period."

In support of the contentions of the report, earnings for leading companies are estimated:

American Home Products Corporation: "Common share returns for the first half of 1931 amounted to $2.77, against $2.59 in the comparable 1930 period. Despite some losses incurred through foreign exchange declines, it is believed that earnings in the final half year were fairly well maintained. Thus, we estimate that full year returns were slightly in excess of the $5.49 shown in 1930. The latter compared with $5.47 a share in the preceding year, and $4.87 in 1928. Current annual dividend rate of $4.20 likely will not be increased in the near future."

Affiliated Products, Inc.: "For the eight months ended August 31, last, net income was equal to $2.22 a common share. No direct comparison is available; in the first half of 1931, share returns of $1.81 were nearly double the $0.96 a share shown in comparable 1930 period. We estimate that full year 1931 profits equaled approximately $3.00 a share, compared with $2.17 a share on a proforma basis in 1930. While the current dividend rate of $1.60 annually is amply covered by earnings, it cannot be regarded as absolutely secure, in our judgment, since increased funds may be needed to liquidate indebtedness, or for expansion purposes."

Drug, Inc.: "Expansion in profit margin from 32 per cent. to 34 per cent. in the first half of 1931 was reflected in per share returns of $3.04, against $3.01 in the comparable interval of the preceding year. While operating ratio probably was maintained during

(Continued on page 79)

Absorption Bases

Some comments on the nature and uses of absorption bases in the preparation of toilet creams and ointments.

ALTHOUGH absorption bases have occupied the attention of chemists ever since the therapeutic value of lanolin became known it is only within recent years that anything definite became known about the absorptive properties of lanolin, and even now the literature on the subject is far from copious and of doubtful value.

Absorption bases, that is substances which have the power of combining physically with water are used in all kinds of toilet creams, hair preparations, ointments, and in many colloidal solutions where a stabilizing agent is needed. Some of them have the dual property of being able to absorb water, while at the same time are themselves absorbed by the skin. Wool-fat and wool-fat by-products are good examples of this.

Lanolin Most Used

Lanolin is of course more widely used than any of the others in spite of its limitations, simply because it was the first in the field, it is comparatively inexpensive and has been used for more than seventy years. Its absorptive properties are quite restricted when compared with some of the bases formed by mixing small percentages of the extracted lanoline chloresterols with suitable oils, fats or waxes; it being capable of combining with only about two times its own weight of water. It is, however, readily taken up by the human skin and scalp whose glands contain cholesterol, one of the constituents of lanolin. It has several objectionable qualities however, which restrict its use and make it somewhat difficult to handle. In the first place, purified lanolin (adeps lanae) is extremely variable and the more it is purified, the less it is capable of absorbing water, because of the fact, that the water absorbing bodies in the natural wool fat, *i e.*, iso and oxycholesterols are partly washed away. Even when lanolin has been highly purified the objectionable goaty odor of the raw wool fat still adheres to it, and, if used in quantities, particularly in fine toilet creams, the objectionable odor cuts through the perfume. Lanolin cannot be kept an unlimited length of time without going rancid, it is not easily saponifiable and its pitchy tenacity makes it extremely difficult to manipulate.

These limitations were recognized by the early investigators and led to research into the water absorbing power and the therapeutic properties of lanolin. Hartmann in 1860, and Schulze in 1872 isolated cholosterin and isocholosterin. But neither of them associated their discoveries with the water capacity of lanolin; both were interested rather in the therapeutic value of lanolin itself. O. Braun later discovered the peculiar water absorbing power of lanolin. In commenting on Braun's work, Liebreich contended that the power of lanolin to hold water was due to the cholesterin ethers it contained. This mistaken view was held for a number of years until Lifschutz (Ber. 29, 2890) proved that these ethers had virtually no water absorbing power at all; and, hence, concluded from his experiments that the absorbing power of wool fat and of course lanolin was due to the fatty alcohols of iso and oxy-cholesterols. Later P. G. Unna investigated this new substance, which had been isolated by Lifschutz who called it eucerin, and his results enabled him to correct the errors of Liebreich.

Eucerin in Many Bases

Eucerine wax is, therefore, the "heart" of all the trade-marked absorption bases which are derived from wool fat. They consist usually of a mixture of eucerin and petrolatum or petrolatum and mineral oil. These oxychloresterol-hydrocarbon mixtures have none of the objectionable features of lanolin and all of its benefits; and besides their power to combine with water is many times greater. Whereas, lanolin will take up only two or three times its weight of water, these lanolin derivatives will absorb from five to seven times their weight of water—and some producers claim that their products will absorb very much more than the above maximum.

These absorption bases form water in oil emulsions. In other words, the water is dispersed in the oil phase. For example, when a five per cent. mixture of cholosterol and petrolatum are mixed with water, the formation of the emulsion is undoubtedly due to the water being dispersed in the petrolatum medium, the cholosterol acting as the emulsifying agent. That higher molecular weight alcohols of this type possess

this property has also received support from the work of Axelrad, who showed that cetylic alcohol from spermacetti possesses a similar action. Lifschutz succeeded in isolating a body from wool fat, partly by saponification, partly by alcoholic extraction and fractional distillation. This body forms a group of free alcohols of iso and oxycholesterine. To this group therefore belongs the water absorbing power of wool fat.

A recently granted German patent for separating wool fat alcohols depends upon primary extraction with methyl alcohol, the waxy residue so obtained being further extracted with an esther alcohol mixture. This residue (which is very difficult to dissolve) when dissolved and reprecipitated from the same esther alcohol solution yields a pure hydrocholesterol.

To mention some of these absorption bases: Eucerine, Eucerite, Thoreps, Aquaphil, Aquaphor, Falba, Protegin, Lanogen, Euvaseline, etc.

"Eucerin," says Unna (J. Am. Phar. Assn. I, 673), "is a mixture of alcohols of the iso and oxycholesterin group with petrolatum." And this is the form in which some of the trade-marked substances appear on the market.

Importance of Bases

The great importance of absorption bases in the manufacture of creams and ointments is clearly set forth by E. Unna ("Druggist's Circular" 1912):

"The disadvantages of both fats" (Unna here refers to lard and mutton fat which used to be widely employed as ointment bases before the discovery of lanolin)" are that they cannot be kept long without going rancid, and they cannot be mixed to any marked degree with alcohol, water, hydrocarbons and glycerine. Yet this miscibility is the first desideratum of a perfect ointment base . . . In the middle of the seventies two mineral bases were placed on the market: petrolatum and paraffin . . . only the fact that it is possible to preserve lard by benzoating it enabled this fat to hold its place among the ointment bases . . . But these ointment bases were not yet the ideal ones. A most important property was lacking in them, to a great extent, that is, miscibility with water and other liquids . . . When in 1885 the adeps lanae or lanolin was put on the market, the above-stated disadvantage seemed to have been overcome . . . The principal difference in the composition of adeps lanae of the Pharmacopoeia and eucerin is the following: In the adeps lanae of the pharmacopoeia the good properties of the oxycholesterin group are badly influenced by the presence of the high molecular acids and alcohols. In the new ointment base, eucerin, we find the only important consitituent of adeps lanae free from all drawbacks to display its action unrestricted . . . In order to show its value as a medicinal agent, I have to explain first the value of an absorbing capacity in therapeutics:

"Cooling ointments or cold creams are of great importance to the dermatologist. The cooling effect is brought about by water, which is incorporated with the fat. This cooling effect is dependent on a physical phenomenon. Water has the property of evaporating. For this purpose it needs heat. This heat it abstracts from the surrounding surface, in this case the human skin, which is cooled thereby. It is clear therefore, that the larger the amount of water present and the quicker its evaporation, the greater must be the cooling effect.

"Adeps lanae does not take up water readily. The suspended water it gives up slowly on account of the tenacity of the fat. In other words, the cooling effect is thereby minimized. With eucerin the result is just the reverse, owing to its great affinity for water and its lack of tenacity . . .

"In this combination of wax alcohols (eucerine) is another very important property, that is the facility with which the ointments prepared with it can be rubbed into the skin. The reason, therefore, seems to be of a physical nature and due to the hydrophilia of the oxycholesterin group

"Modern therapeutics and cosmetics demand of a perfect cold cream:

"First, it must have a great absorbing power for water; second, its fat base must remain unchangeable; and, finally, its consistency must not be greasy or even sticky . . . "

So much then has one of the foremost lanolin research chemists to say on the subject of lanolin derivatives and their importance in present day pharmacology and cosmetology. Dr. Unna concludes his remarkable paper by saying: "Adeps lanae loses its importance utterly since we are able to isolate its most precious constituent, free from all the drawbacks of the crude fat. Eucerine wax, finally, is not an ointment base at all, but the long-sought-for body, by means of which we are able to render any stable fat into an ideal ointment base."

Handling Bases

There are several procedures for handling absorption bases. Water can be incorporated in them without heat. But heat is desirable as incorporation takes place quicker. One method is to mix the base with two or three parts of water and heat until melted, and further to 95° C. Allow to cool then until mass becomes homogeneous, then add the remaining water.

Creams can be made in several ways: the base can be mixed with water with one per cent. of zinc oxide added to make a smooth white cream. To this can then be added the electrolytes or suspended solids depending upon the type of ointment or cream to be made.

A short summary of the number of toilet preparations which can be made with one or the other of the lanolin derivatives will suffice to show the range of application of these important substances:

It is claimed that a vanishing or greaseless day cream can be made which is entirely free from the harsh drying effect of the alkalis and stearic acid in

(Continued on page 34)

Essential Oils Price Situation*

Blank & Stoller

By A. D. Armstrong

THE fourteen month period which ended December 31st, 1930, had witnessed a price decline unprecedented in the history of the essential oil industry. As it brought the general price level below that existing any time during the preceding twenty years it was believed that the decline had run as far as it should and could go. The average loss on the principal oils during those fourteen months amounted to 24.9%. However, the decline continued unchecked throughout 1931 and at the beginning of this year it was found that prices had shown a further decline of 22.7% standing today below anything the essential oil industry a few years ago would have believed to be possible.

It will be unnecessary to dwell on the causes as they are similar to those affecting our allied industries. There are so many contributing factors that this complex situation defies exact analysis. One year ago this Committee gave its opinion that restored confidence and the return to reasonably higher price levels would depend largely upon the establishment of stable economic conditions in the countries and districts where essential oils are produced and the events of the past year seem to have justified that opinion. This is clear from the fact that apart from the price question, distribution and consumption have not suffered too greatly here. Although precise figures are not available it is the belief of the Committee, based on its own experience, that the actual tonnage distribution in the United States has not been less in 1931 than in 1930 or if less, not more than slightly so. Our own organization has handled during 1931 five per cent. more orders than in the previous year. To some extent this may be attributed to the fact that consumers bought more often and in smaller quantities because of the constantly falling market, but, nevertheless, the tonnage held up remarkably well.

On the other hand, consumption abroad has undoubtedly been much less, thereby creating a surplus of oils, and the effort to dispose of them in this market depressed prices further than the actual consumption in our country justified. Moreover, the urgent need of foreign producers for cash interjected into the situation an element of uncertainty and instability, making it difficult for importers here to arrange for their supplies with any degree of assurance as goods were frequently sacrificed without regard to cost.

From the standpoint of the domestic importer and wholesaler an unfortunate result of the situation has been the disregard of standards built up by years of constructive work. This corollary of demoralization might have been expected to some degree but not so greatly as has been evident throughout this period. The scramble to maintain sales volume and to offset losses through value shrinkage brought into the market some low quality goods which in normal times would not even have been offered. But the eager desire of some consumers to participate in the continually lower prices current during the most favorable buyers market for years, caused such goods to move freely into consuming channels to the detriment of the standards of the industry. This factor alone may well

*Committee Report to Drug & Chemical Section, N. Y. Board of Trade. Read by Mr. Armstrong.

have caused both the distributor and the buyer greater harm than the more tangible but less important shrinkage in the values themselves.

The accompanying list comprising the forty-two essential oils responsible for more than 90% of the annual tonnage, shows that thirty-six declined in price, four remaining stationary and two advanced. Although the average decline for 1931 was 22.7% the value of many shrunk much more than this percentage, some even more than 50%. Twenty of the more important individual oils are at the lowest price level for twenty years; the data is incomplete on four and the remainder at some time during the twenty year period have sold below the price now existing, although in no case more than slightly below. Such lower prices were generally caused by an unusually large harvest or a marked falling off in demand for those particular oils.

Your committee considers it impossible to make any very definite statement on the prospects for 1932. There are possibilities of improvement. The consumption of essential oils in this country is great and increasing yearly although temporarily checked now. The very low prices existing have caused some large consumers with surplus cash to consider buying heavily, in some cases for too and three years ahead. They believe and correctly, in our opinion, that money so invested will yield worthwhile dividends when, as inevitably it must, the general market again moves upward and we are one year nearer that than we were a year ago. Shelves in some of the industries we serve are nearly bare, inventories low and even the normal day to day requirements will maintain demand on a reasonable basis for the present at least. It is doubtful if the decline can go much further in essential oils as too many items are already selling below cost of production, a situation which cannot long endure.

It is increasingly evident that a complete return of confidence and an improvement to normal price levels in this country depends upon the ability of foreign sources of supply to maintain their prices on a basis of actual value of the goods. Conditions abroad will doubtless continue to be the determining factor for 1932.

Essential Oils	*Prices Jan. 2, 1931*	*Prices Dec. 31, 1931*	*High for 1931*	*Low for 1931*
Anise Star U. S. P.	.70	.41	.70	.41
Bay	2.10	1.90	2.10	1.90
Bergamot H. P. Extra	2.70	2.10	2.75	2.10
Bois de Rose Femelle	1.40	1.25	1.40	1.25
Cananga Native	2.20	1.50	2.20	1.50
Cassia, U. S. P.	1.05	1.00	1.10	.90
Caraway, Dutch	1.45	1.45	1.50	1.45
Cedar Leaves	1.00	.90	1.00	.90
Cedarwood Light	.38	.31	.38	.31
Citronella, Ceylon	.49	.35	.49	.31
Citronella, Java	.60	.55	.62	.52
Cloves U. S. P.	1.65	1.05	1.70	1.05
Coriander	5.00	4.25	5.00	4.25
Eucalyptus U. S. P.	.40	.31	.41	.31
Geranium Algerian	4.35	3.75	4.60	3.75
Geranium Reunion	3.90	3.50	4.25	3.50
Hemlock	1.00	.90	1.00	.90
Lavender U. S. P. X Extra	2.25	1.95	2.40	1.95
Lemon Ital. U. S. P.	1.20	.90	1.20	.90
Lemon Cal.	.85	.75	.85	.70
Lemongrass Native	.70	.58	.70	.58
Limes Dist.	8.00	8.50	10.50	8.00
Limes Expr.	17.00	13.50	17.00	13.50
Nutmeg	1.25	1.00	1.25	1.00
Orange S. W. Ital.	2.65	2.00	2.65	2.00
Orange S. W. Cal.	2.45	1.80	2.45	1.80
Patchouly	5.50	4.00	6.00	4.00
Pennyroyal European	1.05	1.00	1.05	1.00
Peppermint U. S. P.	2.30	1.75	2.30	1.75
Petitgrains Para	1.20	1.10	1.30	1.10
Pine Needles	.62	.58	.62	.58
Rosemary U. S. P. Extra	.46	.46	.48	.44
Rose Otto Pure	15.00	12.00	15.00	12.00
Safrol	.29	.29	.29	.29
Sandal E. I.	8.25	6.50	8.25	6.50
Sassafras Art.	.26	.26	.26	.26
Spearmint	2.60	1.25	2.60	1.25
Spike Extra	.60	.75	.75	.55
Thyme Red Extra	.85	.70	.95	.65
Wormseed	4.00	2.75	4.00	2.75
Wormwood	6.00	4.50	7.00	4.50
Vetiver Reunion	6.25	5.00	6.25	5.00

French Mimosa

(*Continued from page 28*)

Geranium, terpeneless, natural essential oil of	2	cc.
Lemon, terpeneless, natural essential oil of	2	cc.
Mimosa, natural essential oil of (absolute)	30	cc.
Lilac, artificial oil of	2	cc.
Linalol, of bois de rose	5	cc.
Heliotropine	2.5	gr.
Methylacetophenone	2.5	cc.
Phenylethyl alcohol	5	cc.
Coumarin	5	gr.
Alcohol C^{11}	1	gr.
Alcohol C^{10}	2	gr.
Anisic aldehyde of anethol	5	gr.
Aldehyde C^{10}	0.5	gr.
Aldehyde C^{11}	1	gr.

Absorption Bases

(*Continued from page 32*)

ordinary vanishing creams. Also it is claimed there can be made the so-called all purposes creams, cold creams, tissue creams, astringent creams, scalp pomades, non-resinous brilliantines, hair tonics (to prevent the falling of hair), deodorant creams, the so-called cold cream face powders, and a host of other preparations not to mention the variety of uses it may find in medicated ointments, liniments and the like.

It is further claimed that creams made from absorption bases by the addition of water (1) are unaffected by the addition of ordinary electrolytes; (2) are capable of retaining a considerable percentage of alcohol; (3) are capable of holding suspended solids; (4) rancidity does not occur nor are perfumes affected; (5) water does not evaporate as readily in this type of emulsion as in the oil in water.

The New Vitamin Standards

FOLLOWING the conference of Vitamin product authorities held last May under the direction of U. S. P. Chairman of Revision. E. Fullerton Cook, a second such conference was held January 8 at Hotel Pennsylvania, New York. In the interim, however, a similar conference was held in London, June 17, 1931 by the Health Organization of the League of Nations, at which conference Doctors E. V. McCollum and H. Steenbock presented the conclusions of the May U. S. P. conference.

Some idea of the scientific talent which is aiding the U. S. P. XI Revision Committee in this work is obtained from the list of those present at this second conference:

E. Fullerton Cook; John F. Anderson (Squibb); Charles E. Bills (Mead, Johnson); Archie Black, New Brunswick, N. J.; R. A. Dutcher, State College, Pa.; W. H. Eddy, Columbia University; A. D. Emmett, Detroit; George E. Ewe (Tailby-Nason); M. S. Fine, Battle Creek, Mich.; Mr. Goulden, Newark, N. J.; Alfred Hess, New York; Arthur D. Holmes (Patch); Charles W. Hooper, New York; James H. Jones, Philadelphia; Robert L. Jones, Detroit; E. F. Kohman, Washington, D. C.; Clifford S. Leonard, (Burroughs, Wellcome); Henry T. Mason, Newark, N. J.; E. V. McCollum, Baltimore; William J. Horn, Bridgeport, Conn.; Lafayette B. Mendel, New Haven, Conn.; A Graeme Mitchell, Cincinnati; E. M. Nelson, Washington, D. C.; Carl Nielson (Abbott); E. J. Quinn, New York; H. W. Rhodehamel (Lilly); W. H. Sebrell, Washington, D. C.; H. C. Sherman, New York; Harry Steenbock, Madison, Wis.; Julia B. Paton, New York.

The conference considered the matters agreed upon at the London International Conference which are:

Vitamin A Standard: "That carotin be accepted as an international provisional standard of reference for vitamin A and that a selected sample of cod liver oil be held in view as a possible secondary standard."

Vitamin A Unit: "The unit of vitamin A recommended for adoption is the vitamin A activity of 0.001 mg. of the international standard."

The National Institute of Medical Research, London, was requested to act as central laboratory to undertake final preparation of the sample of carotin. Carotin deteriorates unless carefully protected, and therefore is not subject to distribution. Therefore, it is proposed to determine the activity of a carefully selected cod liver oil, and distribute that oil as reference samples in standardizing cod liver oil and related products for distribution and sale.

Vitamin D Standard: "That the standard solution of irradiated ergosterol at present issued by National Institute of Medical Research, London, be adopted as international vitamin D standard."

Vitamin D Unit: "Unit of vitamin D recommended for adoption is defined as vitamin D activity of 1 mg. of the international standard solution of irradiated ergosterol." (Official reports state this is provisional for two years, in hope that a more stable crystalline substance will then be available.)

Vitamin B_1 Standard: "Adoption, as international standard, of the adsorption product of the anti-neuritic vitamin B_1 prepared in the Medical Laboratory, Batavia, Java, by the method of Seidell, as described by Jansen and Donath."

Vitamin B_1 Unit: "The unit recommended for adoption is the anti-neuritic activity of 10 mg. of the international standard adsorption product."

"Note: A daily dose of 10 to 20 mg. of this preparation is required to maintain normal growth in a young rat on a diet deficient in the anti-neuritic vitamin B but complete in all other respects, including the anti-dermatitis vitamin (B_2); the curative 'day dose' for a pigeon (300 Gm. weight) suffering from polyneuritis on a diet of polished rice is about 20 to 30 mg."

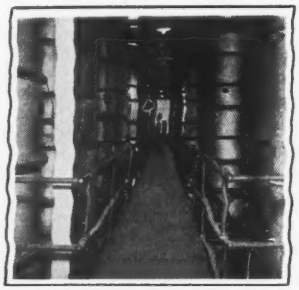
Vitamin C Standard: "The Conference recommends adoption as international standard for the anti-scorbutic vitamin C of fresh juice of lemon, Citrus limonum."

Vitamin C Unit: "Unit of antiscorbutic vitamin C is the Vitamin C activity of 0.1 cc. of fresh juice of lemon, Citrus limonum."

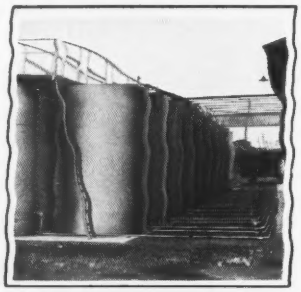
The London Conference agreed not to discuss or propose any detailed biological assay method for

• DIVISION OF U. S. INDUSTRIAL ALCOHOL CO. •

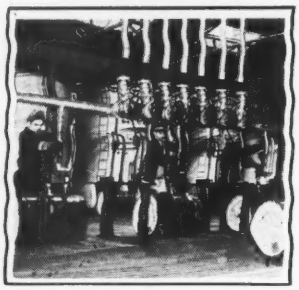
In these large distilling columns many chemical solvents are produced.



An assembly of 20 large storage tanks for important solvent chemicals.



Accurate measure is guaranteed by these automatic - electric filling machines.



ETHYL OXALATE

(*Di-ethyl Oxalate*)

$(COOC_2H_5)_2$

SPECIFICATIONS

Color and Properties:
Colorless liquid

Constants:
Ester—at least 97%
Sp. gr. 1.077 at 20°/20° C.
Wt. per gal. 8.96 lbs.
Acidity: Not over 0.1% as oxalic acid
Boiling point: 184°—185°C.

Solubility:
Miscible in all proportions with alcohol, ether, ethyl acetate, and other common organic solvents. Only very slightly soluble in water.

Derivation:
Esterification of oxalic acid

Method of Purification:
Distillation

Grades:
Technical 96-100% di-ethyl oxalate

Containers:
Steel or tin-lined drums
Glass bottles

Fire Hazard:
Combustible, but not inflammable, flash point above 80° F.

Railroad Shipping Regulations:
None

LEADING manufacturers in the pharmaceutical and dyestuff industries are the largest tonnage purchasers of this important chemical. Ethyl oxalate is also used extensively by research chemists as its structure lends itself readily to organic coupling.

The extreme purity and uniformity of ethyl oxalate are guaranteed by a rigidly enforced manufacturing standard supervised by a corps of 24 chemists. Today, the U. S. I. C. Company is the largest producer of ethyl oxalate.

Trial samples will be furnished on request while working quantities are supplied to manufacturers and laboratories at nominal cost. U. S. Industrial Chemical Co., Inc., 60 East 42nd Street, New York City, N. Y.

U.S. INDUSTRIAL CHEMICAL CO., INC.

WORLD'S OLDEST AND LARGEST MANUFACTURER OF ALCOHOL CHEMICALS

Ethyl Phthalate. Butyl Phthalate.
Nitrocellulose Solutions

Amyl Acetate. Butyl Acetate. Ethyl Acetate.
Ethyl Chloro Carbonate. Ether

• DIVISION OF U. S. INDUSTRIAL ALCOHOL CO. •

determining exact vitamin activity of various products. It was believed that by establishment of international standards and international unit values any approved biological method might be employed if in the hands of experienced operators and if the substance to be tested and the standard preparation were simultaneously assayed by the same method. This conclusion, reached by the London Conference, was not considered suitable for adoption by the U. S. P. U. S. P. standards are subject to enforcement under the Food and Drugs Act and it becomes necessary to establish an official method. The manufacturer will then know that his product will be evaluated by the same method by which they were standardized.

Therefore, the New York Conference arrived at the following conclusions:

Vitamins A and D Standards and Units: Recommended adoption by U. S. P. Committee of Revision of the international standards and units for vitamins A and D. It is expected that the Food and Drug Administration will distribute reference samples of cod liver oil having a known value in relation to the international vitamin A standard, and also a standard irradiated ergosterol of known international vitamin D unit value.

Vitamins A and D Assay Methods: The Conference considered the several methods of assay proposed, and, with slight modifications, recommends those offered by the Vitamin Assay Committee of the American Drug Manufacturers' Association (A.D.M.A.). These modified methods will soon be made available.

The standards and unit values and also assay methods approved by the New York Conference will promptly be submitted to the U. S. P. Committee of Revision for its consideration. If accepted, these will be announced as the new standards for Cod Liver Oil, under regulations of U. S. P. X, and a reasonable time will be allowed to lapse before the new standard are enforced as the official requirements. These new standards will constitute an "interim revision" of the U. S. P.

The New York Conference recognized that at present the U. S. P. is not required to adopt standards or assay methods for vitamin B_1 and vitamin C since no products containing these vitamins are official. However, since so large a group was in conference, and many members of the group represented those who are interested in vitamin standards within the United States, it was believed desirable that this Conference should also express its opinion concerning the international standards proposed for vitamins B and C. The Conference thereupon voted its approval of standards adopted by the International Vitamin Conference, at London, for these additional vitamins.

A New Vitamin Source

THE latest development in the production of vitamin medicinals is a product which has for its base and for its supply of vitamin A the oil of the liver of the halibut. This oil, it is claimed, under ordinary conditions runs 100 to 125 times cod liver oil in vitamin A content. In vitamin D content, the oil is said to be ordinarily 25 times the potency of cod liver oil. For the purposes of a pharmaceutical of proper dosage, the vitamin A

content of the natural is reduced by dilution, while the vitamin D content is greatly increased by the use of Viosterol. But to tell of the basic phases of the product.

In order to make available a supply of halibut oil for the production of pharmaceuticals containing the oil, it was necessary to create a new branch in the halibut fishing industry, providing for a regular and sufficient supply of fresh halibut livers. These livers have heretofore been allowed to go to waste, no one suspecting their great value for human nutrition.

This has now been accomplished. Trained men were sent to the fishing ports to study the character and habits of the halibut, investigate the various phases of the industry and the amount of halibut available from year to year. The fishermen were taught how to collect and handle the fresh livers and suitable methods were developed to preserve the livers, and prepare them while fresh for the extraction of halibut liver oil.

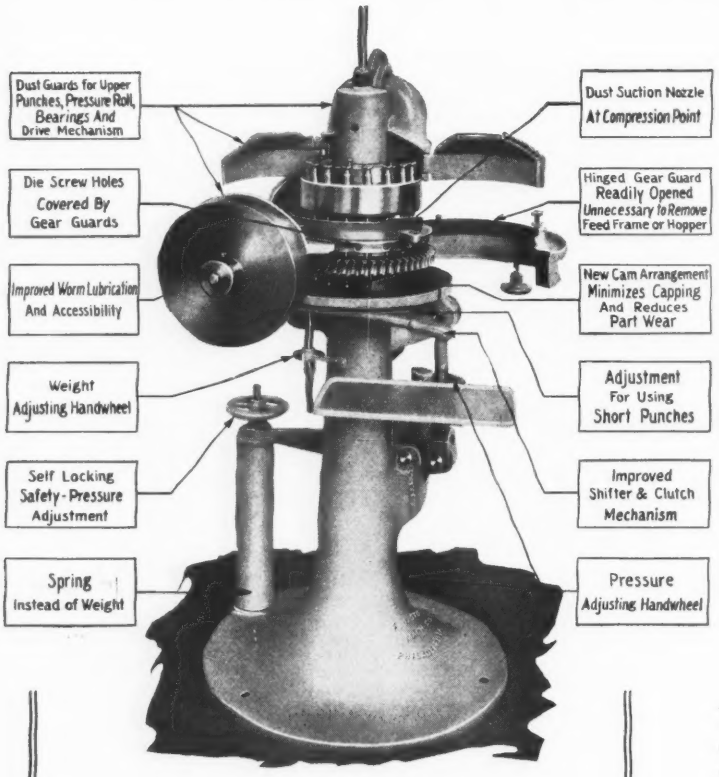
The halibut varies in size from 25 to 400 pounds or more. The greater part of the fish is meat and fat, but the body itself is almost devoid of vitamins A and D. The liver is surprisingly small in proportion to the size of the fish, but it contains relatively large amounts of oil exceedingly rich in vitamin A and D.

Most of the halibut fishing is done in large power boats equipped for deep sea fishing, enabling the fishermen to reach the more distant banks where the halibut is taken from a depth of from 50 to 300 fathoms. In these deep waters the temperature is

(Continued on page 83)

Are You Satisfied—

with YOUR TABLET MACHINES ?


Dust Guards for Upper Punches, Pressure Roll, Bearings And Drive Mechanism
Die Screw Holes Covered By Gear Guards
Improved Worm Lubrication And Accessibility
Weight Adjusting Handwheel
Self Locking Safety-Pressure Adjustment
Spring Instead of Weight
Dust Suction Nozzle At Compression Point
Hinged Gear Guard Readily Opened Unnecessary to Remove Feed Frame or Hopper
New Cam Arrangement Minimizes Capping And Reduces Part Wear
Adjustment For Using Short Punches
Improved Shifter & Clutch Mechanism
Pressure Adjusting Handwheel

Investigate the many advantages of the new

STOKES "B-2"

Rotary Tablet Machine

FEATURES

Greater cleanliness

(a) Guards completely enclose clutch and drive gears, bearings, worm box, punches, cams, and pressure rolls, protecting these parts from dust.

(b) Shoulder on die-table prevents dust from lodging in die-screw holes.

(c) Built-in nozzle at point of compression, for collecting dust.

Greater convenience

(a) Feed frame remains in place when hinged gear-guard is opened or while lower punches or cams are being cleaned, inspected or removed.

(b) Improved automatic Alemite lubrication for worm, with drive readily accessible.

(c) Feed frame level easily adjusted by thumbnuts.

(d) Easily-adjusted handwheel, with self-locking thread, gives fine control of pressure on safety release, in which a spring replaces weights. Calibrated thread facilitates setting proper release pressure for various tablet diameters.

(e) Improved clutch and shifter mechanism.

Greater efficiency and economy

(a) New cam arrangement minimizes capping by letting upper punch rest on tablet during first part of ejection. Ejection is smooth and part-wear reduced.

(b) Adjustment permits use of lower punches which have been shortened by refacing.

(c) Housing of parts saves time formerly used for cleaning and reduces part wear.

This new model replaces the well-known STOKES "B" Rotary. Its new features—added to the proved advantages of the previous model—form the latest STOKES contribution to lower production costs for the pharmaceutical manufacturer.

Mail the coupon below or write us for further information on this new machine or on the other new machines listed.

Tear off and mail

FJSTOKES MACHINE COMPANY

5932 Tabor Road, Olney P. O.,
Philadelphia, Pa.

Please send information on the new machines checked:

- ☐ "B-2" Rotary Tablet Machine
- ☐ Oscillating Granulator
- ☐ Drying Closet
- ☐ Granulating Mixer
- ☐ Coating Pans
- ☐ Capsule Filler

Name.....

Position.....

Company.....

Address.....

Tablet Making

A discussion of practices proven to be sound in the manufacture and packaging of tablets.

By Francis Chilson

TABLETS and pills have become the accepted means for the administration of medicines which need only to be taken in small quantities and more particularly of that class which is bitter, nauseating or irritating to the taste. Unlike liquids, the use of either tablets or pills makes it possible to administer medicines so that they will be taken to the affected area before they begin to function. This is accomplished by compounding the tablet or pill or their coating in such a fashion that they will disintegrate in the stomach or else in the intestines. Of the two forms tablets seem to be gaining in favor over pills, probably because of the fact that the former are somewhat easier to make and also because there are a large class of substances (aspirin, soda-bicarb-charcoal) which do not require coating. Nevertheless, there are many substances that do require one form or the other; pills being especially adapted for heavy metallic materials and also for those which must dissolve slowly. The impression that pills are used only for powerful medicaments which are given only in very small doses is not true as they can be used for other medicines used in larger quantities; and they can be made as large as tablets. Both pills and tablets range in weight from a fraction of a grain to as much as thirty grains. Pills, incidentally, are better suited for highly volatile and oxidizable materials than tablets because of the unavoidable exposure tablet materials must undergo in manufacture.

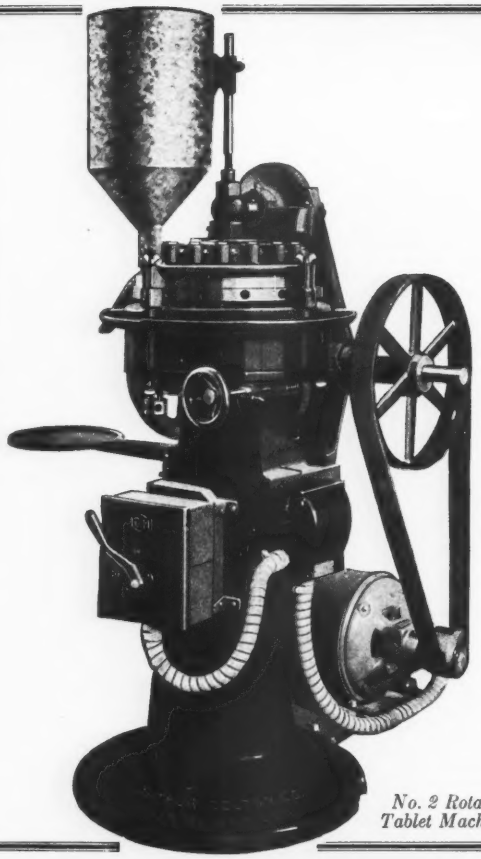
The first consideration is the preparation of the tablet mass. This is the most simple of all operations in connection with tablet making. As a rule the mass consists of the medicament, the base and a binding agent. Many materials are bought in the open market and can be compressed at once without the addition of anything else—for example, sodium phosphate, potassium and ammonium chlorides, bromides, etc. Materials of this character will need sifting only in order to make sure that the crystals are of fairly uniform size. A certain amount of fines are desirable to make the tablets hard and smooth. Sometimes it may even be necessary to dry them. In this event they should not be dried so thoroughly that they will give up their water of crystallization. Once in a while these granular materials will be too coarse for successful compressing and will have to be ground in a drug mill or granulator.

As it is not possible to give exact working directions for the preparation of the tablet mass because of the fact that each medicament or combination of medicaments will dictate to a large extent its own base and excipient, only a few precautions will be mentioned here.

As a rule the bases selected will be some inexpensive and relatively inert material such as starch, milk sugar, precipitated chalk, charcoal, a mixture of starch and sugar, etc. etc. The base used will determine the amount of excipient that will be required; charcoal for example is very difficult to granulate; it needs about 12% of acacia solution and about 15% of glucose in order to secure sufficient cohesion to enable the tablet to reach the stomach.

Starch is an excellent base. It is a disintegrating agent and for its most effective use it should be added in two ways, possibly two-thirds or three-quarters of the total quantity being mixed with the excipient and drug to be granulated in the regular manner and then, just before lubricating and compressing, adding possibly 2% more. Starch mixed with the drugs breaks apart the individual granules in the tablets while the loose starch breaks apart the tablet itself so that the granules can be reached by the water or dissolving medium.

Ordinarily the medicament, the binder and the base can all be mixed together, but there are numerous instances where such a procedure would cause a chemical reaction that would destroy the medicinal power of the tablet. Often where two incompatible medicaments are incorporated it is necessary to mix each of them in a separate quantity of the same base, or else two different basic substances, after which the separate components are granulated and then mixed together.



No. 2 Rotary Tablet Machine

New and Improved!

We have no yearly models—but improvements and refinements are being constantly added to Colton machines.

There are over five hundred Colton Rotaries in use.

Superior design, sturdy construction and ease in operation have made this possible.

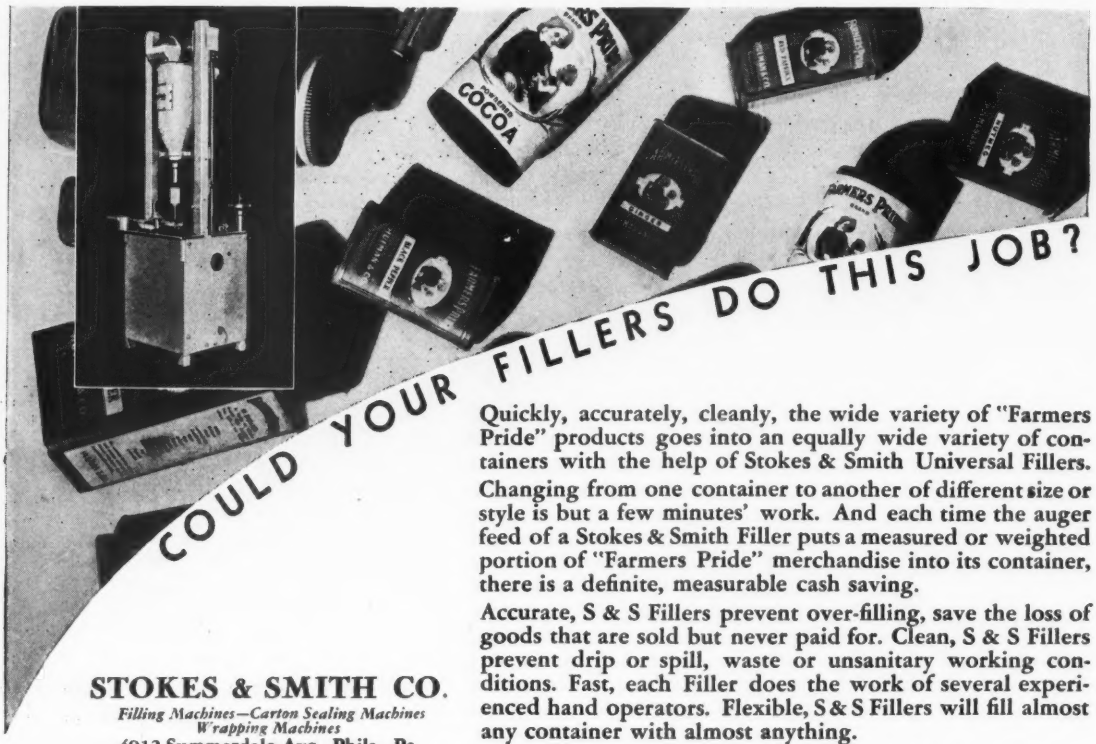
The No. 2 Rotary Tablet Machine has such desirable features as *positive pressure*, eliminating varying thicknesses of tablets; *hardened steel gear drive*, eliminating frequent replacement of worms used on other makes, and *sliding upper punch holders*, to hold the punches rigidly, enabling the manufacture of special shaped tablets most satisfactorily.

Write for Catalogs.

ARTHUR COLTON COMPANY

2620 East Jefferson Ave.

Detroit, Michigan



COULD YOUR FILLERS DO THIS JOB?

Quickly, accurately, cleanly, the wide variety of "Farmers Pride" products goes into an equally wide variety of containers with the help of Stokes & Smith Universal Fillers. Changing from one container to another of different size or style is but a few minutes' work. And each time the auger feed of a Stokes & Smith Filler puts a measured or weighted portion of "Farmers Pride" merchandise into its container, there is a definite, measurable cash saving.

Accurate, S & S Fillers prevent over-filling, save the loss of goods that are sold but never paid for. Clean, S & S Fillers prevent drip or spill, waste or unsanitary working conditions. Fast, each Filler does the work of several experienced hand operators. Flexible, S & S Fillers will fill almost any container with almost anything.

Details and specifications will be gladly furnished upon request

STOKES & SMITH CO.

Filling Machines—Carton Sealing Machines
Wrapping Machines

4912 Summerdale Ave., Phila., Pa

British Office: 23, Goswell Road, London, E.C.1

Whenever two or more substances are to be incorporated in the tablet mass, the nature and quantity of the binder is extremely important. Those usually employed are water, water and alcohol, solutions of dextrin, tragacanth, acacia, sugar, glucose, gelatin, starch paste, etc. Glycerine of course must never be used because it causes the granules to stick together, thus preventing a free flow into the dies and also, as it is hygroscopic, it will absorb moisture from the air and in time ruin the tablet coating if it does not actually cause the tablet constituents to react. Whatever binder is used it ought not to be dumped into the mass but sprayed in so as to form the granules gradually without saturating the mass too much. With sticky extracts and certain other mixtures, materials other than water must be used as the binding solution to moisten the mass. Acetone is much used as well as carbon tetrachloride and even benzene in certain instances. With extracts water should not be used, though, to cheapen the granulating process, a certain small per cent. of this may be mixed at times with acetone or alcohol. The solution may cost a little more but the time saved in drying and the trouble saved in compressing many times repays it. By adding less binder and mixing a little longer it will be better distributed and not cause later trouble in the granulating machine. If a little more than a certain amount of binding solution is added this is, of course, squeezed to the surface in forcing it by hand or by machine through a screen to break it up into uniform granules. Less binding solution also, means a shorter time in the dryers.

Granulating

The most important operation in the manufacture of tablets is granulating. Upon the precision and uniformity with which this operation is carried out depends the success of the compressing operation and the appearance and stability of the finished tablets.

One of the primary reasons for granulating lies in the fact that fine mesh powders have a tendency to pack which prevents free flowing from the supply hopper of the tablet machine into the dies. An excess fine powder sticks to the punches and dies and force frequent stoppages for cleaning. Moreover, fine powder carries considerable air along with it into the dies, and since it cannot escape between the close fitting punches and dies, it is compressed in the interstices between the particles with the result that the tablets are not sound and will later crumble or cap. Capping is caused also by worn punches and insufficient binder. In view of the fact that there is no such thing as uniform grinding or granulation, a certain percentage of fine powder will in any event be present in the finished granules; but ten or twelve per cent. of fine powder mixed with the granules does not make any difference. As a matter of fact in each granulation there should be a certain amount of fines—as stated above—to fill in the cracks between each of the granules so the tablet will be solid and of good appearance. The finer the granulation the more lubricating powder must be added and this usually causes the trouble since insufficient lubricating ingredients have been used to coat the fine powder and the result, of course, is that this fine powder sticks to the punch face. However, fines and non-uniform granules may cause much trouble when the proper compressing equipment is not employed. When old fashioned one-pucnh machines are used or where the old multiple punches are used and the granulation contains a certain amount of fines and granules, the pharmaceutical manufacturer has trouble. Considering the multiple punches and a feed shoe moving over the holes to load the dies, the vibration of the shoe causes the fines to sift through to the throat of the shoe while the coarser particles run down the top and to the holes on the far side away from the feed shoe throat. This means that tablets nearest the throat of the feeding shoe are heavier and take the pressure while those further away from it are of light weight and receive less pressure accordingly. There are entirely too many of these old wrecks and multiple punch machines around the country which cause the tablet makers all kinds of trouble in set-up, etc., never do produce uniform tablets for the reasons stated, and also because it costs too much money to make a very uniform granulation and sift out all the fines, etc. This embarrasses the sales department or management because the Government comes down on the manufacturer for weights beyond the lawful tolerance.

Use of Petrolatum

In order to facilitate the expulsion of the compressed tablet from the die, it is necessary to add to the tablet mass about one per cent. of liquid petrolatum, air floated talc, pulverized stearic acid, or some of the other waxes like carnuba. Petrolatum must be used with caution as it may cause splotchiness. If the tablets are not to be coated the addition of some wax, particularly carnuba or beeswax, gives the finished tablet a bright lustre, which at once makes it possible to operate the tablet counting and filling machine (in the cases where a separate machine is used) and also makes the tablet easier to swallow. The addition of lubricants should be carefully done as some of the waxes decrease the solubility of the tablets, and, in the case of those intended for disintegration in the stomach, they might permit the tablets to pass through to the intestines before breaking up.

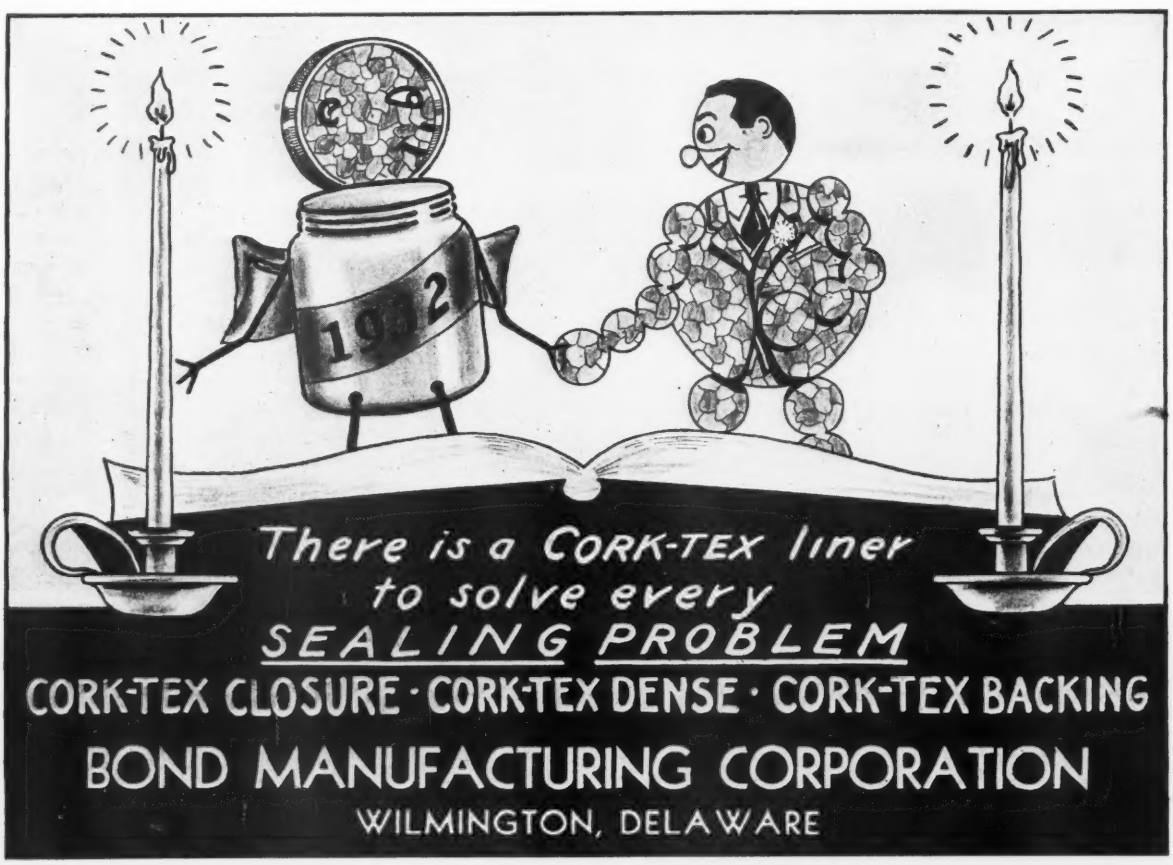
In order to keep the punches clean it is common practice to dust the dried granules with air floated talc or a mixture of talc, stearin and starch, (about two per cent.) This keeps the granules from sticking. When lubricants are added after the granules have been finished, care must be taken to avoid crushing the granules or the work of granulation will have been wasted.

RESINOX

MOLDING RESINS
LAMINATING VARNISHES

• • • •

RESINOX CORPORATION
A SUBSIDIARY OF COMMERCIAL SOLVENTS CORP.
AND CORN PRODUCTS REFINING CO.
230 PARK AVE. NEW YORK CITY



The operation of granulating may be divided into three types: dry, double compression and wet. Some reference has already been made to the first. In addition to this, some manufacturers wet the mass with the binding agent, dry it thoroughly and then granulate it. When this procedure is followed the finished granules must be sifted again in order to secure relative uniformity, unless the tablet maker is careful this procedure may result in very hard granules, which require tremendous pressure on compression.

The double compression method is used for aspirin and certain products to which no excipient can be added. In this process the tablets are first "slugged," then they are granulated. these granules are then lubricated. Granulations made in this fashion are very uniform. It is desirable that granules be uniform thoroughly dry and not too hard.

Wet Granulating

Wet granulating enjoys increasing favor because of the simplicity with which it may be carried out. Some of the mass mixers in which the tablet mass is mixed are provided with atomizers so that granules are formed as the mass is mixed. In some cases the finished product can be transferred on trays to the dryers without additional granulating. In most cases additional granulating is necessary and in any case better results are assured in this fashion.

The wet mass can easily be granulated. If production is limited all that is needed are a block of wood or a paddle and a hand seive of 20 mesh, the granulation being accomplished by rubbing the mass through the screen. This is the principle followed in the larger wet granulators which, by means of an oscillating arm or other device, rub or press the mass through a screen of the proper mesh.

It is important that the granules as they leave the granulator be not allowed to heap up and this is particularly true when they are sticky.

The trays of granules are then carried to a shelf dryer. Standard dryers can be obtained heated by means of steam, gas or electricity and fitted with blowers to circulate warm dry air. As dryers can be obtained with or without blowers, it is important to emphasize that the efficiency of a dryer depends upon the rapidity of the circulation of warm dry air. To attempt to dry granules in a dryer without a blower will cause "blistering" or baking. This means that the granules will be apparently dry on the outside but actually contain imprisoned water that will seep out and give the tablet a spotty appearance. Certain tablet granules containing volatile substances like essential oils, camphor, benzoic acid and the like, and also other substances which are adversely affected by light and air should be dried in a vacuum dryer. If the percentages of volatile substances are relatively small, it may be dissolved in alcohol and sprayed on the dried granules just before compressing.

Effervescent tablets must be carefully made in order to avoid reaction. The bicarbonate mixture must be prepared, granulated and dried separately. Likewise the tartaric or citric acid mixture. Then the granules of both mixtures are mixed and compressed. In such mixtures of course watery excipients cannot be used—alcohol being most commonly employed.

Fortunately, the compression of tablets is one of those rare processes which can be carried on with high speed even when production warrants only a small, hand operated press. Even these hand presses (which have as a general rule an automatic feed hopper) will turn out 100 8 grain tablets per minute. The full automatic rotary models pour the tablets out in a continuous stream at a rate of 1,000 or 1,500 per minute. The automatics can be obtained with filling attachments for uncoated tablets which are merchandized to the trade in bottles.

Compressing

Before starting the compressing operation, it is necessary to regulate both the amount of pressure and the amount of the feed. The former is accomplished usually by means of a simple machine adjustment; the latter by making a few tablets and weighing them. Once set the machine will constantly deliver tablets of absolutely uniform weight. Itiswell to remember that excessive compression will cause too much wear or "ring" the dies in such a way that will cause the tablets to cap. Some of the newer presses however have an integral pressure release device to control this.

The size and thickness of the tablet in relation to its weight should be determined in selecting the proper size punches and dies. One of the tablet machinery manufacturers recommends the following punch diameters for materials of average density: 1 grain 7/32 inch; 11/2 grain ¼ inch; 2 grains 9/32 inch; 2½ and 3 grains 5/16 inch; 3½ to 4 grains 11/32 inches; 4½ to 5 grains ⅜ inch; larger sizes from 6 to 20 grains range from 13/32 to ⅝ inches.

Up to the present most manufacturers have followed their own fancy with respect to the shape of tablets, (with the exception of corrosive sublimate, which the U. S. P. dictates shall be triangular, and also effervescent tablets which should be rather large in diameter so that they will react instantly and completely as soon as brought into contact with water), there has been relatively little work done on the relation of the size and shape of the tablet in relation to ease of swallowing and subsequent ease of disintegration in the stomach or intestines. Many tablets are square or rectangular besides a host of other geometric shapes, many of which are extremely difficult to swallow—although the most common shape is oval.

The coating and polishing of tablets is simple but belongs in that class of empirical operations which require considerable practice. At present the coating of tablets varies with the weather and the man who has not had much experience will experience considerable difficulty, especially in wet weather when the tablets are sluggish and the coating very sticky. To

(Continued on page 79)

AN ADHESIVE FOR EVERY MACHINE OR HAND OPERATION

ROLL CALL !

Yearly we go over our list of customers and find that more and more manufacturers are *turning to*

MIKAH

"TESTED" ADHESIVES

The reason is obvious . . . for by using Mikah Adhesives, they are sure of getting the same necessary results and production economies year in and year out. Eliminate some of your production worries . . . be present at our next roll call.

NATIONAL ADHESIVES CORPORATION

Home Office—820 Greenwich St., New York

1940 Carroll Ave., Chicago — 883 Bryant St., San Francisco
15 Elkins St., Boston — 1305 Germantown Ave., Philadelphia

WORLD'S LARGEST PRODUCER OF ADHESIVES

Sales Offices in all principal cities

ANNOUNCEMENT!

Mr. Emil Schaedler, whose packages attracted unanimously favorable comment at the First Packaging Conference and Exposition, has become associated with this organization in charge of package design.

NOW YOU CAN TAKE THE GAMBLE OUT OF PACKAGE DESIGN CHANGES!

No longer need you fear that a projected design will not prove economical or practical in *production* . . .

No longer need you take chances with free lance artists and agencies who know nothing about the production, chemical, and other practical problems of the industry . . .

Now you can improve your packages with the assurance that the new designs will not only be correct from an artistic and advertising standpoint, but that they will also be practical from a production standpoint . . .

All our packages will be the result of superior artistic talent and wide production experience.

We know design. We know production. And our prices are right!

FRANCIS CHILSON

Consultant in Packaging and Production

One Hundred One West Thirty-first Street

NEW YORK

CHickering 4-0437

For Plant Managers

By Francis Chilson
Consulting Production Engineer

A Real Wrapping Machine

For a long time we harbored the notion that cylindrical objects like cream jars or powder boxes, which require folding on top and bottom could not be wrapped automatically by machinery. This notion was confirmed by the refusal of the large wrapping machinery houses to attempt to wrap anything but square and preferably rectangular or oblong packages, and also by their admission that they believed irregular shaped objects to be wrapped by hand. Of course during this time, we supposed that the round cakes of fancy toilet soap, pleated top and bottom, and also the triangular pieces of Swiss and Camembert cheese, which are wrapped in foil, were wrapped by hand. However, we have discovered the machine that performs these difficult feats, plus others equally difficult. It is fully automatic and will wrap foil, paper, glassine, or transparent cellulose. It will also wrap the glassine or cellulose wet if required. Also it will place a label on the top and bottom of a cylindrical object. We shall be glad to furnish the name of the manufacturer of this machine upon request.

Prophesies

That the process of percolation is about to be completely revolutionized and that the apparatus of the future will make drug extraction and concentration, together with solvent recovery, possible in one machine . . .

That the process of grinding will be revolutionized and that the mills of the future will not depend upon impact or attrition but will achieve finer disintegration by the application of particle disruption or explosion . . .

That the same principle, *i. e.*, sudden particle disruption will be applied to the mixing of liquids . . .

That most of the compounding operations of the future will be carried out entirely under vacuum or under very high pressures . . .

That a way will be discovered to blow metal bottles exactly as glass is blown . .

That a way will be discovered to place decalcomania labels on machine blown bottles automatically before the bottles are annealed, and that this process will be carried on with very little increase in cost . . .

That a way will be discovered to blow glass of two different colors in the same mold so that the manufacturer of the future will be able to buy machine made ware with his name or crest embossed on the bottles in a contrasting color . . .

Contributed to Drug Markets by the ego of Jules Verne.

Power Costs Continued

Amplifying our note of last month, we shall explain the method by which power companies charge for current. Large users of current are given a power factor which is supposed to represent the mean daily average K. W. consumption. Let us assume that this is 85% and that it represents a demand of 400 kw. Let us assume further that the reading of the meter revealed an actual power factor of 90% and that the power consumption for the period amounted to 5,000 Kw. hrs. Your bill would be calculated as follows, beginning with the determination of the power factor charge: (Dropping the ciphers).

$$4 \times 50 \times \frac{85}{90} = \$188.00$$ Demand charge.

To this would be added the 5,000 kw. hr. consumption at the usual wholesale rates.

Let us suppose that due to some emergency the standard power factor was run up to 500 kw. hrs. for only fifteen minutes during that month. How much would you be soaked for demand charge ? The calculation would be:

$$5 \times 50 \times \frac{85}{90} = \$236.00$$

In other words that fifteen minutes of emergency costs $48.00 extra. If you have not given before this matter your attention, scan your power bills for the past year with particular attention to your demand charges. You probably will be amazed.

Watch the Cost of Shipping Small Orders !

Investigating the cost of shipping for a small company recently we came across some interesting facts. This company had been unable to reduce shipping costs and was perturbed by the fact that during some months when sales were low shipping costs were high. Analysis of the orders shipped for the previous six months showed that an immense amount of time was devoted to the shipment of orders for which the company received no money—like replacements due to errors on previous orders, breakage, etc.; back orders, advertising matter samples etc. The analysis showed:

	Shipments
Replacements due to errors, breakage, etc.	2,805
Back orders	951
Samples, no charges, & advertising matter	16,734
Orders under twenty-five dollars, each	5,049
Orders over twenty-five dollars, each	6,435
	31,974

The tabulation showed that the orders over twenty-five dollars each accounted for more than 90% of the company's dollar volume! Of course much of it was due to faulty planning of production, carelessness in packing, faulty routing, and lack of proper shipping materials. In most organizations the shipping room is more or less an orphan among the departments, despite the fact that from five to ten per cent. of the operating cost of the business is devoted to it. This department should come in for its share of management together with the manufacturing and packaging departments.

Wanted a New Shipping Material

We wish that some inventive person would develop a shipping case material that would combine the lightness of corrugated with the strength of wood. He'd make a fortune. Balsa wood has this property but is too expensive. Some day some one may discover a way to laminate wood veneer with corrugated or fiberboard.

An Association of Factory Managers

The desire for an association of factory managers in the pharmaceutical and cosmetic trades keeps coming to the surface. Such an association is strongly to be desired as it would benefit the trade enormously. Other industries have them, why not we ? The following letter from Dr. H. B. Brown of Mifflin is very interesting and expresses the need for such an association very well:

"Factory Managers' Association I, personally, think is basically and fundamentally sound.

"In days gone by it would have been nonsensical even to broach the matter for

(*Continued on page 77*)

ART
TUBE
COMPANY

IRVINGTON, N. J.

. . . our story . . .

You just can't get better tubes than ART TUBES . . . or any better prices . . . ask us to prove it . . . you'll be glad you did . . . .

"POUR-OUT"

Another outstanding improvement has been developed by GUTMANN! A simple means of enabling one to pour out the contents of a bottle without dripping over the side is now available for large bottlers using automatic conveying equipment between their filler and capper.

This "POUR-OUT" is furnished as a part of our C. T. caps, and is automatically transferred onto your bottle when cap is applied.

This invention is covered by our Patent No. 1,837,618.

Simply submit samples of your product and let us return them to you with our cap and "POUR-OUT" attached.

FERDINAND GUTMANN & CO.

Bush Terminal No. 19 **BROOKLYN, N. Y.**

Bottle Closure Specialists Since 1890

SANISEAL METAL MILK CAPS

Metal Screw Caps *Distilled Water Caps*

Crown Corks *Special Purpose Caps*

"FILMASEALS"

Trade Mark Reg. *Pats. Pending*

Packaging Account WANTED

ESTABLISHED Manufacturers' Representative specializing in packaging service to Toilet Goods and Drug Manufacturers would like two additional accounts for metropolitan New York territory. Facilities include New York office and long standing acquaintance with the trade.

Write in confidence to
Box 843
DRUG MARKETS

News

People

Dr. Wellcome Knighted

Dr. Henry S. Wellcome, president, Burroughs Wellcome & Co., London, pharmaceuticals, was knighted by King George on New Year's eve. His name was included in the New Year's honor list and knighthood was conferred in recognition of his generous support of medical research.

He is a native of Wisconsin and a British subject by naturalization. He is a graduate of the Philadelphia College of Pharmacy and Science, and for years has been a recognized leader in research in medical science. His company, Burroughs Wellcome & Co., has in addition to its London laboratories, establishments in the United States, Italy, Canada, Australia, China, India, and other countries. Other scientific institutions established and maintained by him include

Sir Henry S. Wellcome

the Wellcome Physiological Research Laboratories, the Wellcome Chemical Research Laboratories, the Wellcome Historical Medical Museum, and the Wellcome Bureau of Scientific Research and Museum of Medical Science—all located in London—an entomological research laboratory at the Royal Horticultural Society Gardens in Surrey, and the Wellcome Tropical Research Laboratory, Khartoum, Africa, which operates a fully equipped floating research laboratory on the upper Nile. A building is being erected in London, which will be known as the Wellcome Foundation Medical and Chemical Research building and will be used to co-ordinate and extend the activities of the various Wellcome institutions.

He is a director of the Gorgas Memorial Institute of Tropical and Preventive Medicine, Washington. He is a life member and the incumbent honorary member of the American Pharmaceutical Association and is much interested in the proposed American Institute of Pharmacy building in Washington. It is his custom to spend a part of each year in Washington. Dr. Wellcome is an honorary fellow in three British scientific societies and is a member and officer in many others. He has an honorary degree of doctor of laws, conferred by the University of Edinburgh in 1928.

Allen Leaves Sterling Products

W. M. Allen, manager Sterling Products, Inc., Wheeling, W. Va., has resigned from that organization to devote himself to his private interests. He was connected with Sterling Products for 22 years, having gone to Wheeling upon the acquisition of the Sterling Remedy Co. in 1909. Most of these 22 years were spent in Wheeling, although in 1912, when the California Fig Syrup Co., Louisville, Ky., was acquired by the parent company, he spent two years as manager of the plant there. In August 1914, when the J. G. Dodson Co., Atlanta, Ga., was purchased, he devoted a year to arranging the affairs of the Dodson plant. In 1915, when all of the manufacturing activities were centralized in Wheeling, he returned to that city and has been there ever since.

Wolke Resigns from Stanco

John C. Wolke, vice-president in Charge of Sales of Stanco, Inc., resigned that position and severed all connection with Stanco effective January 1, 1932. Mr. Wolke's plans for the future have not been announced.

A. Rosenfeld Resigns

A. Rosenfeld, formerly vice-president and general manager, Les Parfums de Molyneux, New York, has announced his resignation from that company.

Stewart Leaves Rawleigh

Paul N. Stewart, for the past six years traveling sales representative, W. T. Rawleigh Co., Freeport, Ill., vanilla importers, has resigned from that organization to become general sales manager, Moshier Bros., Ashland, Mass., extract and flavor manufacturers.

Edwards Resigns from Grasselli

Frank J. Edwards, for many years in charge of New York City sales of phosphates, acetic acid, sulfides, etc., for the Grasselli Chemical Co., du Pont subsidiary, has announced his resignation from that company, effective January 1.

Danco Quits McKesson

Leon Danco, formerly vice-president, McKesson & Robbins, Inc., creator for McKesson of the Lucretia Vanderbilt line of perfumes and cosmetics, and in charge of production of shaving cream, toothpaste, bay rum, and other toilet preparations, recently resigned his position with that company. He is now working on future plans which he is not yet ready to announce. McKesson & Robbins recently sold the Lucretia Vanderbilt line to Grenoville, Inc.

Brewer Leaves Gomez & Sloan

William T. Brewer, well-known figure in the vanilla bean trade and formerly

William T. Brewer

associated with Gomez & Sloan, Inc., New York, has announced his resignation from that company as of December 24, 1931.

L. C. Namy Joins Poray

L. C. Namy, formerly connected with Ungerer & Co., New York, has become associated with Poray, Inc., Chicago, as New York City representative.

W. A. Oren Joins Stearns

W. A. Oren, a former president of the N. A. R. D., has become associated with Frederick Stearns & Co., Detroit, as sales representative in northern and central Indiana.

Rendigs Walgreen Publicity Mgr.

P. D. Rendigs has been appointed publicity manager, Walgreen Co., Chicago, succeeding F. C. Williams, resigned.

Frank Head in Charge of "Seventeen"

Frank Head, formerly with the Owl Drug Co., has been placed in charge of promotion and sales of the "Seventeen" line of the Colgate-Palmolive-Peet Co.

Russell Howe Joins Hillier

Russell Howe, formerly with the United Chemical & Drug Corp., and before that member of the firm of King & Howe, Inc., has been appointed Eastern representative of the R. Hillier Son Corp., New York. He will cover the New York State, New England and Baltimore territory.

Rueckert Director of Walgreen

E. E. Rueckert, assistant secretary-treasurer, Walgreen Co., Chicago, has been elected a director of the company to fill the vacancy created by the resignation of John McKinlay.

Anderson Succeeds Rodriguez

Percy E. Anderson, closely identified with the drug business for the past forty years, has purchased the essential oil business of the late John H. Rodriguez. George Briasco, formerly connected with the firm of A. Stilwell & Co., New York, will be associated with him in conducting this business, while the Stilwell company will be liquidated.

The name of John H. Rodiguez will be retained and the business conducted along strict brokerage lines. The business has been removed from 101 Beekman st. to 90 John st., New York.

Hogstad Head Pharmacy Week

Dr. Anton Hogstad, Jr., special assistant to the president of Merck & Co., has been appointed chairman of the committee on pharmacy week of the American Pharmaceutical Association. He is a graduate of the Philadelphia College of Pharmacy, class of 1914, and from 1917 to 1925 was professor of pharmacognosy and materia medica at South Dakota College of Pharmacy. In 1926 he became professor of Materia Medica and physiology at St. Louis University and was also made pharmacognosist of the Missouri Botanical Garden. He has been with Merck & Co., since 1930.

Lamb Heads Chemical Society

Prof. A. B. Lamb, Harvard University, has been elected president of the American Chemical Society for 1933, succeeding Dr. L. V. Redman, Bakelite Corp., who becomes active president for 1932. New directors are E. M. Billings, Eastman Kodak Co.; Prof. Roger Adams, University of Illinois; R. E. Wilson, Standard Oil Co. of Indiana. New councilors are G. J. Esselen, Boston; Prof. R. A. Gortner, University of Minnesota; Prof. E. E. Reid, Johns Hopkins University; R. E. Weidlein, Mellon Institute.

Robert Lund President Mfrs. Assn.

Robert L. Lund, vice-president, Lambert Pharmacal Co., St. Louis, has been elected president of the National Association of Manufacturers, succeeding John E. Edgerton.

Mennen Gives to Cornell

William Mennen, president, the Mennen Co., Newark, has recently given $25,000 to Cornell University for the completion of a dormitory, plans for the construction of which were entered into after an original gift from him of $25,000.

Dr. Weed Meets with Entomologists

Dr. Alfred Weed, entomologist of John Powell & Co., Inc., New York, attended the convention of the Southern branch of the Entomological Society held in New Orleans during the week of December 28.

Etman Opens M M & R Boston Office

Louis D. Etman, well known throughout the wholesale and manufacturing drug trade, is now sales representative for Magnus, Mabee & Reynard, Inc., New York, for the New England States. Mr. Etman has opened a Boston office for

Louis D. Etman

Magnus, Mabee & Reynard, at 1140 Little Building, telephone, Hancock 3693.

Mr. Etman was long engaged as assistant manager of the New York office of Powers-Weightman-Rosengarten Co., which firm was later merged with Merck & Co. More recently Mr. Etman was in charge of the New York office of the J. T. Baker Chemical Co., Phillipsburg, N. J. Mr. Etman has a wide circle of friends in the wholesale and manufacturing drug trade, and is expected to do very effective work in building up demand for the products of Magnus, Mabee & Reynard, which constitute a full list of essential oils, aromatic chemicals, flavors, etc.

W. L. Engesser Joins Alsop

Alsop Engineering Co., New York, announces that William L. Engesser has been added to the sales staff to cover suburban New York and New England territory.

Gordon & Newman Joins Young Bros.

Young Bros., Inc., Providence, fancy boxes and mailing cases, has increased its sales staff in the New York territory through the addition of H. R. M. Gordon and E. W. Newman. The former will specialize in the toilet goods field while the latter assists F. G. Demarest in the general fields.

Mackintosh Leaves Hamilton

C. A. Mackintosh, assistant to A. K. Hamilton, sole sales agent for the alcohol division, Pennsylvania Sugar Co., has resigned and has been succeeded by J. H. Dunphy.

Whelpley Heads Nitrate Group

Medley G. B. Whelpley, member of Guggenheim Bros., has been elected president of Cosach, the Chilean nitrate combine.

Mysore Commissioner Returns

Mr. Ranganatha Rao, the Mysore Government Trade Commissioner in London who recently visited this country, making his headquarters with W. J. Bush & Co., New York, sailed for Europe, January 4, aboard the Majestic. His stay in this country was somewhat shorter than was planned as important business abroad necessitated his return.

"Some Tooth Paste Ingredients"

R. R. Renick, chief chemist, Iliff-Bruff Chemical Co., Hoopeston, Ill., dentifrice division of the Swann Corp., was the author of the article entitled, "Some Tooth Paste Ingredients", which appeared on page 560 of the December issue of DRUG MARKETS. Through a very regrettable oversight, his name did not appear over this article and this correction is printed in an effort to rectify this omission as much as possible.

Sheehan Auto Club Official

Hoyt R. Sheehan, vice-president, Wildroot Co., Buffalo, hair preparations, has been elected a director of the Buffalo Automobile Club.

Major Medicine Advances

John F. Anderson, director, biological laboratories, E. R. Squibb & Sons, holds that the major developments in medicine during 1931 have been in the fields of endocrinology and vitamins.

Predatory Price Cutting Committee

D. C. Keller, president, Dow Drug Co., Cincinnati, and Charles Wesley Dunn, counsel, American Pharmaceutical Manufacturers' Association, are members of the newly organized Committee on Predatory Price Practices, sponsored by the Affiliated Better Business Bureaus.

Chemical Synthesis of Vitamin D

Dr. Charles E. Bills and Dr. Francis G. McDonald of the research laboratory of Mead, Johnson & Co., Evansville, Ind., reported, December 29, at the annual meeting of the American Association for the Advancement of Science, that they had succeeded in producing vitamin D in test tubes by combining ergosterol with methyl alcohol, ether, and ethyl acetate, under low temperature with oxygen removed, and then washing the preparation with ammonia. No irradiation whatever was employed in the process.

The substance is said to have a potency of 71,000 Steenbock units, as compared with 16,000 units obtained by Windaus of Gottingen and discussed in these pages last month.

Companies

Squibb Honors Twenty Year Men

E. R. Squibb & Sons held a dinner, December 10, in the Squibb Auditorium, at which nine employees, each of whom had completed twenty years of service with the company, were honored. F. W. Nitardy, vice-president in charge of manufacturing, acted as chairman of the dinner.

Noxzema to Build in Canada

Noxzema Chemical Co., Baltimore, is organizing the Noxzema Chemical Co. of Canada, Toronto, for the production and distribution of its goods in Canada. The new company is controlled by the parent organization with George A. Bunting, head of the Baltimore corporation serving as chairman of the board of the Canadian company. J. Marvin Shaw becomes president and general manager and Raymond F. Sullivan, vice-president. The company is preceding with plans to establish a plant in Toronto.

Affiliated Products Buys Konjola Option

Option has been granted to J. Lymann Pratt, chairman, Affiliated Products, Inc., Chicago, to purchase the interests of Konjola, Inc. Offer was $25,000 for an option, the money to be used in operating the business for six months, at the end of which period the company would be reorganized if a satisfactory showing had been made. Rollo Lawry, vice-president of Affiliated will operate the Konjola business for the six months.

D. S. C. to Meet Feb. 15

Druggists' Supply Corp. will hold its nineteenth annual convention and exhibition at the Hotel Pennsylvania, New York, February 15 to 19.

First Texas Chem. Buys "Lax Aspirin"

First Texas Chemical Manufacturing Co., Dallas, has purchased trade-mark and property of "Lax Aspirin" and plans to manufacture and market the product.

Arnao Co. Buys "Bob-O-Lene"

Charles Arnao Co., Minneapolis, has acquired "Bob-O-Lene", a hair preparation, from Aladdin Laboratories, Inc.

Kaltman Sole Jersey City A. D. S. Agent

American Druggists' Syndicate, Vadsco Sales Co. subsidiary, has transferred all A. D. S. sales in northern New Jersey to D. Kaltman & Co., Jersey City, wholesaler. The latter company thus secures complete sales rights in that territory for A. D. S. products.

McKesson Buys Davis & Britt

McKesson-Doster-Northington, Inc., Birmingham, Ala., has purchased the assets of the Davis & Britt Surgical Supply Co., that city.

Zonite to Build Canadian Plant

Zonite Products Corp., Ltd., plans construction of a plant at Ste. Therese, Canada, which is expected to be completed about April 1.

Lambert Sends Stockholders Presents

Lambert Co., St. Louis, "Listerine", sent each one of its 8,500 stockholders a Christmas letter from the president, John L. Johnston, and a Christmas package consisting of a gift box containing "Listerine Rub", "Listerine Shaving Cream" and "Prophylactic Tooth Brush".

Amer. Comm. Alcohol Resumes at Pekin

American Commercial Alcohol Co. resumed operations, December 5 at its Pekin, Ill., plant and is reported to be grinding 6,000 bushels of corn daily.

Princess Pat Silver Anniversary

Princess Pat, Ltd., Chicago, is celebrating the twenty-fifth anniversary of its founding and is planning an extensive advertising campaign emphasizing this fact.

Colonial Dames Build New Plant

Colonial Dames Co., Ltd., Hollywood, Calif., toilet preparations, has erected a new plant in that city at 4652 Hollywood blvd. The building is early American in architecture in keeping with the company's background. Officers are H. P. Willats, president; M. J. Wilbur, treasurer; and G. B. Selig, secretary.

Bischoff Gets Georgi Account

Ernst Bischoff Co., Inc., New York, has been appointed sole representative in the United States and Canada for Curt Georgi, Leipzig, Germany, essential oils and aromatics.

Armstrong Offers Metal Caps

Armstrong Cork Co., Lancaster, Pa., is now offering a complete line of brass base caps for continuous thread bottles. These caps, which have been named "Armstrong's Artmetal Caps", were perfected by Armstrong and the Chase Brass & Copper Co., Waterbury, Conn., who will manufacture them. "Artmetal Caps" are offered in both single and double shell types and in standard as well as special designs. They are made in a wide variety of attractive metallic and lacquer finishes to harmonize with all package designs and colors. A complete range of sizes, from 13 to 33 millimeters, is available.

While the sale of double shell caps, formerly made by Consolidated Safety Pin Co. of Bloomfield, N. J., a subsidiary of the Chase companies, will be taken over by Armstrong, the Consolidated Safety Pin Co. will continue to sell jar closures direct to the cosmetic trade.

With the addition of these metal caps the Armstrong closure line includes "Artmold" (molded plastic) caps and jar covers, corks of every kind, embossed top corks, crowns, Du Pont cellulose caps and beverage bands, rubber stoppers, cap liners, and daubers and applicators of various types.

Chemist Sample Box

R. P. C. Co., New York, has designed a sample storage box for liquids and solids especially designed for the chemist and others who need a convenient place for indexing and storing various sample products for ready reference.

M. Klein Organizes Ampul Business

M. Klein & Co., Inc., domestic and imported ampuls and other pharmaceutical supplies, has been organized by M. Klein, formerly associated with Popper & Klein, New York. The new company has offices at 220 Fifth ave., that city.

Evans Organizes Ru-No-Ma

Ru-No-Ma Co. has been organized in Atlanta, Ga., by George H. Evans, formerly connected with the advertising and sales departments, Zonite Products Co., to manufacture and sell a new product recommended for rheumatism and neuritis.

Zonite mid-western sales force arrives in New York by plane to attend annual sales convention

WE ADD TO THE LINE

NOVO-FOUGERE

A Delightful New Perfume Oil in Our Excellent, Low Price "Novo" Group

For your popular priced cosmetic line . . . the *full* line, from creams and powders to extracts and bath salts . . . you know "Novo" group, of course.

Now we present NOVO-FOUGERE. It is equally versatile. It cannot cause discoloration.

We sincerely believe there is no finer perfume oil at these prices. NOVO-FOUGERE is $8.00 the pound, $7.75 in 5 to 10 pound lots, and $7.50 in 25 to 100 pound lots.

Please ask us for a sample of NOVO-FOUGERE. We know you will like it.

GIVAUDAN-DELAWANNA

INCORPORATED

80 Fifth Avenue ◆ New York, N. Y.

McKallor Drug Buys Nichols Drug

E. C. McKallor Drug Co., Binghamton, N. Y., wholesaler, has acquired the business of the Nichols Drug Co., Corning, N. Y.

Eastern Chemical Co. Formed

Eastern Chemical Co., Westbrook, Me., has been organized to manufacture organic chemicals. M. H. Zimmerman is president.

Orbis Quits Tombarel Freres

Orbis Products Trading Co., Inc., New York, has announced that its agency connection with Tombarel Freres, Grasse, France, has been terminated.

Morgan Moves

Clarence Morgan & Co., Chicago, has moved its offices into more spacious quarters at 411 West Eleventh st., that city.

Midway Chemical Moves

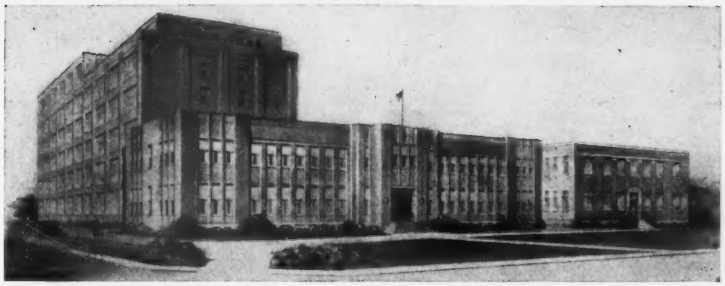
Midway Chemical Co., Chicago, "FLYed" insect sprays, has moved to its new plant at 5235 West 65 st., that city.

Cosmetics Affiliated Lease Space

Cosmetics Affiliated, Inc., New York, has leased 10,000 square feet of floor space at 457 East 147 st., that city.

Northam Warren Plans

Northam Warren Corp., New York, hand preparations, held its annual sales convention in the Northam Warren building, that city, December 4-6. At that time, it was announced that the sales forces of "Cutex" and "Glazo" lines were to be combined in one general sales staff handling all the lines of the Northam Warren Co. It was also announced that the company was placing a new hand cream, "Cutex Hand Cream" on the market. The annual banquet for the sales organization was held at the Hotel Astor, January 5, and was followed by a theater party at the Earl Carrol Theater.



Proposed Scientific Buildings of Wm. S. Merrell Co.

Coty to Build English Plant

Coty, Inc., Paris, France, is said to be planning to establish a factory in England, as a result of a new British tariff of 50 per cent. on perfumery and cosmetics.

Cawood Forms Patterson Engineering

Patterson Engineering Corp., affiliated with the Patterson Foundry & Machine Co., East Liverpool, Ohio, has been organized by R. L. Cawood, president of the latter company; P. E. Welton, consulting engineer; and R. B. Koontz, formerly president and general manager, Adamson Machine Co.; to design and manufacture specialized rubber machinery.

R. & H. Product Booklets

Roessler & Hasslacher Chemical Co., Niagara Falls, N. Y., has published three booklets, "Sodium Perborate", "Trichlorethylene" and "Non-Flammable Solvents", copies of which may be obtained upon request.

Coupey Fils Changes Name

Coupey Fils, New York, essential oils, is now doing business as Eric Coupey, with offices at 109 Waverly place, that city.

Mentholatum Insures

Mentholatum Co., Wichita, Kan., has announced the adoption of a cooperative and insured retirement plan for the benefit of its employees.

Leuders Rose Booklet

George Lueders & Co., New York, essential oils, is distributing an illustrated, informative booklet on "The Rose in Bulgaria". The booklet was prepared by Batzouroff & Co., Bulgarian producer of oil of rose, for which George Lueders & Co. is exclusive agent in the United States and Canada, and gives production figures and other information concerning the centers of production. Copies may be obtained upon request.

Whelan Opens New Store

Whelan Drug Co., Inc., chain stores, recently opened its 212th unit at Broadway and 47th street, New York. A. M. Rosenthal, president of the organization, was present personally to welcome the many representatives of the drug trade who were invited to the opening.

Phosphorus Deficiency Brings Dental Caries

Prof. E. V. McCollum and Dr. Henry Klein of Johns Hopkins University, in the current issue of "Science", official organ of the American Association for the Advancement of Science, have described experimental evidence which indicates that a deficiency of phosphorus in the diet of a rat produces dental caries, a breaking down of tooth structure in the molars resulting in cavity formation.

The same experiments indicate, that a proper amount of phosphorus immunizes the animal against the ailment. It was further found that a relation exists be-

Northam Warren Sales Banquet

PERFUME PROBLEMS PSYCHO-ANALYZED!

Psycho-analysis is, comparatively speaking, a new development in the field of social science. In the perfume field, however, it has long been put to practical use by our Research Department for the ultimate solution of perfume problems confronting the trade. » » »

●

As applied to perfumery, psycho-analysis is an exhaustive study of known odors and raw materials and the quest for new and improved ones. As applied to *your individual problem it is a means toward imparting* new scent and new appeal to your product. Our service is available to you. » » » » » »

●

We are likewise creators of raw materials used to lend *perfume effects to:*

SOAPS . . . CREAMS . . . EXTRACTS
. . . BATH SALTS . . . FACE POWDERS
. . . TOILET WATERS . . . TALCUM
POWDERS . . . INSECTICIDE SPRAYS
. . . DEODORIZING BLOCKS

●

FRITZSCHE BROTHERS INC.

Proprietors of
PARFUMERIES DE SEILLANS
Seillans, France

78-84 BEEKMAN ST.,
NEW YORK, N. Y.

Sole Agents in the U. S. and Canada for
SCHIMMEL & COMPANY
Miltitz (near Leipzig) Germany

tween the concentration of phosphorus in the blood and dental caries in the rat, and that this concentration depends on the level of phosphorus, calcium and Vitamin D in the diet.

Boncilla Repackages

Boncilla, Inc., Indianapolis, has completely repackaged its line of beauty preparations, the liquids in a nickel-capped cylindrical bottle and the creams in green metal packages. The company has also announced a new brushless shaving cream.

New Products

D'ORSAY COMPACT

D'Orsay Perfumeries Corp., New York, has introduced a new sifter compact filled with Comtesse d'Orsay face powder and Comtesse d'Orsay rouge.

TWO NEW EXPELLO PRODUCTS

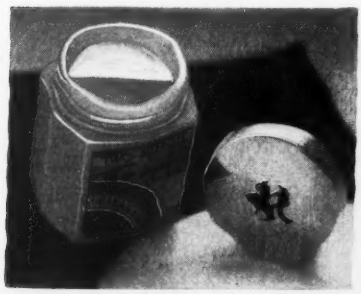
Expello Corp., Dover, N. H., has added two new items to its line, "Expello No. 4" for killing moth worms, and "Expello Spot Removerand Dry Cleaner".

"EDWENIL"

Immunities Laboratories, Inc., New York, American representative for Edward H. Spicer & Co., Ltd., England, are marketing a new anti-bacterial agent known as "Edwenil", designed for treatment of bacterial invasions of an endotoxic nature.

TERRI'S "TWO-PURPOSE" CREAM

Terri Cosmetics Corp., New York, has added a new "Two-Purpose" cream to its line. This cream is obtainable in five



different combinations and its feature is the fact that two creams—a lemon cream and a cleansing cream, for example—are packed side by side in the same jar and thus designed to be used simultaneously.

"SOOTHENE"

Espy Corp., Milwaukee, is promoting the sales of a new skin lotion, "Soothene". Carl Espy, Jr., is president and A. C. Frank, vice-president of the company.

ZERKT "ULYPTO" PRODUCTS

Zerkt Pharmacal Co., St. Joseph, Mo., has added two new products to its line, "Ulypto" mentholated cough drops and "Ulypto" ointment.

METAPHEDRIN INHALANT NO. 99

An oil solution combining ephedrine and metaphen to be used as an inhalant for treating head colds, hypertrophic rhinitis and allied conditions. Distributed in 1-oz. and 16-oz. bottles. Manufactured by Abbott Laboratories, North Chicago.

MEDICATED HANDKERCHIEFS

Dr. H. Tischer Corp., Chicago, has introduced a new product, "One-Drop Medicated Handkerchiefs", said to be the first medicated tissues offered to the public. The company is the maker on "One Drop Inhalant."

A. M. A. Accepts

COD LIVER OIL CONCENTRATE

An extract of the non-saponifiable fraction of cod liver oil in maize oil, to which has been added gluside (3 in 10,000) and oil of cassia 2 per cent. Not less than 5,500 vitamin A units per gram as determined by U. S. P. method, equivalent to 143 Steenbock units or 1,428 A. D. M. A. units. Manufactured by the Clinadol Co., Inc., New York. U. S. trade-mark 279,325.

MERRELL'S FIBROGEN

Fibrogen Local-Merrell, for uses and action N. N. R., 1931, p. 186, manufactured by Wm. S. Merrell Co., Cincinnati.

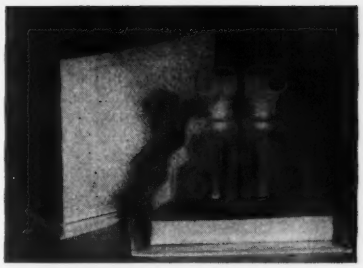
TYPHOID VACCINE

Typhoid Vaccine, N. N. R. 1931, p. 376, manufactured by U. S. Standard Products Co., Woodworth, Wisc.

A. M. A. Rejects

MCKESSON'S COPPER-IRON

Copper-Iron Compound, manufactured by McKesson & Robbins, Inc., because the firm has not submitted acceptable evidence to show that the preparation is superior to the iron preparations in current



New Owens-Illinois Dressing Table Set

use it has been declared unacceptable because of unwarranted therapeutic claims.

A. D. A. Accepts

CAREL'S ALPHANAPHTHOL

Alphanaphthol ($C_{10}H_7OH$) Action resembles that of betanaphthol. Used as gargle, mouthwash, etc. Manufactured by Carel Laboratories, Redondo, Calif. Also "Alpha-Naph-Co" a compound solution of alphanapthol, and "Alpha-Naph-Co" dental cream.

SANDOZ CALGLUCON

Calglucon Effervescent Tablets, manufactured by the Sandoz Chemical Works, Inc.

Ambruster Sues Drug Firms

Anglo-South American Trust Co., Parke, Davis & Co., E. R. Squibb & Sons, S. B. Penick & Co., F. W. Berk & Co., Abbott Laboratories, John J. Shore Co., and the Oil, Paint & Drug Reporter are named as defendants in a suit brought by Howard W. Ambruster, New York, asking judgment in the sum of $500,000 with interest and costs, for alleged conspiracy. Bill of complaint recites numerous charges relating to the plaintiff's engagement in the business of importing and selling ergot. Another suit asking a similar judgment is also pending in the

New Advance Laboratories Products

Try a New Idea

Everyone having to do with perfuming is familiar with the practice of "duplicating." How many have the courage and ability to *originate?*

A new odor idea may be a tremendous factor in your success. Will you try one? *Can you create one?*

The aromatic essentials house of today is prepared to create sales-giving perfumes for every product.

In fact you generally find that the ones which are flourishing are those that have the best perfumers. To them come cosmetic makers in search of perfuming ideas. Because the aromatic essentials house *creates.*

No one has all 100% ideas, but we (meaning our customers) have a pretty high percentage of successes.

Try a new idea—one of ours.

Sharima—fineness, body, appeal...$14.00 to $80.00 lb.
Muguet—flowery, lasting, versatile. $14.00 to $40.00 lb.
Soul—new, original, pleasant....$28.00 and $80.00 lb.
Bouquet de Fleurs—light, fragrant, popular $7.00 to $40.00 lb.
Eve—heavy, rich, striking.....$20.00 to $150.00 lb.
Perrol for Powder—with the true Perrol character $20.00 and $30.00 lb.
Bells—unusual, refined, strong.....$28.00 lb.
Ambrome—well-liked by women.....$28.00 lb.
Bouquet Five—clever, modern, in demand $10.00 to $80.00 lb.
Viderone—growing in popularity.....$28.00 lb.
Opoponal—for all purposes.....$16.00 to $80.00 lb.
Bouquet New—interest, novelty.....$6.00 to $12.00 lb.
White Rose—lasting fragrance.....$8.00 to $40.00 lb.
Lilac Sprigs—true lilac odor.....$8.00 to $40.00 lb.
Lilac Vegetal—used the world over..$4.00 to $12.00 lb.
Idol—delightful, heavy, successful $20.00 to $100.00 lb.
Dream—oriental, harmonious.....$16.00 lb.

van Ameringen-Haebler, Inc.

Manufacturers and Importers of

Aromatic Essentials

{*Flavor Materials, Aromatic Chemicals*
Essential Oils, Perfume Specialties}

315 FOURTH AVENUE, NEW YORK

180 North Wacker Drive, Chicago 619 Clark Avenue, St. Louis 42 Wellington Street, E., Toronto

Factory, Elizabeth, N. J.

New York Supreme Court. Those named as defendants in the latter are National City Bank, Am. Bluefriesveem, Inc., F. W. Berk & Co., and J. L. Hopkins & Co.

Metz Labs. Defends "Pyramidon"

H. A. Metz Laboratories, Inc., New York, has secured an injunction restraining thirty druggists and seven drug peddlers and itinerant vendors from selling imitation pyramidon. This injunction was granted to the company, December 10, in a further effort to stop the sales of this product, the registered trade-mark of which is owned by the company.

Union Solvents Judged Infringer

Union Solvents Corp., New York, has infringed the Weizmann patent for the production of acetone and butyl alcohol by bacterial action, according to a decision handed down, December 29, by Judge John P. Nields, in the U. S. District Court, Wilmington. Plaintiffs were Guaranty Trust Co., Butacet Corp., and Commercial Solvents Corp. Union Solvents Corp. will appeal the decision.

Harriet H. Ayer Suit Adjourned

Suit of Harriet Hubbard Ayer, Inc., New York, against Recamier Mfg. Co., alleging unfair competition, in the New York State Supreme Court, has been adjourned until after a hearing in the Federal District Court in New York on the merits of the trade-mark litigation involved.

Phillips Loses "Leche de Magnesia"

McKesson & Robbins, Inc., Bridgeport, Conn., has been successful on a rehearing of the action in the United States Circuit Court of Appeals, in having invalidated the right of the Charles H. Phillips Chemical Co., New York, to the trade-mark, "Leche de Magnesia". A recent decision invalidated the latter company's rights to the mark, "Milk of Magnesia" but not the right to "Leche de Magnesia". However, at the rehearing, the court reversed its former stand on this last mark and found that the Phillips company is not entitled to registration of the mark "Leche de Magnesia", holding that this designation is the ready equivalent of "Milk of Magnesia" to many people and that the use of the word "magnesia" in both marks is likely to result in confusion.

Hughes Fights F. T. C. Ruling

E. Griffith Hughes, Inc., Rochester, N. Y., "Kruschen Salts", "Radox Bath Salts", has filed an answer with the Federal Trade Commission charging that entry of a cease and desist order to stop making certain claims as to the efficacy of these products would violate its constitutional rights and denying allegations contained in the commission's complaint.

Northam Warren Defends Ads

Northam Warren Corp., New York, has appealed to the United States Circuit Court of Appeals from an order of the Federal Trade Commission requiring the company to cease and desist from using in its advertising or authorizing the use by others of testimonials for which it has paid, without disclosing the fact of such payment.

The corporation contends that the statements it has used in testimonials are true, and that the commission's special attorney conceded in his brief that "the testimonials truthfully and accurately set forth the opinions of their several authors as to the quality and efficiency of said products." The corporation further contends that it does not pay prominent persons to express opinions favorable to its products, but only pays for the right to use the name of persons who express such opinions.

Standard Brands Cited for Ads

Standard Brands, Inc., and the Fleischmann Co., New York, have been charged by the Federal Trade Commission with unfair competition in the use of paid testimonials as to the therapeutic benefits of Fleischmann's yeast.

Lentheric Blocks Trade-Marks

Patent Office has refused Victor W. Titus the right to register the words "Nancy Lee" and "Miracle Cream" for use as a trade-mark for massage cream, in view of prior registration and use by Lentheric, Inc., of the word "Miracle" on a line of cosmetics.

Vick Fails to Block Trade-Marks

Court of Customs and Patent Appeals has ruled that Maurice E. Cordry may register as a trade-mark for salve a design which contains the words, "Vapor", "Vanishing" and "Just Rub It". Registration was opposed by the Vick Chemical Co., owner of the trade-mark "Vaporub", which it uses on a product of the same general class.

"Puretest" Blocks "Tru-Test" and "Purex"

United Drug Co. has prevented registration by Sears, Roebuck & Co., Chicago, of "Tru-Test" as a trade-mark for a line of chemical, medicinal and pharmaceutical products. Commissioner of Patents held that the word would be confusingly similar with United Drug's trade-mark, "Puretest", used on a similar class of goods. Company also blocked registration by the Purex Corp., Ltd., Los Angeles, of trade-mark, "Purex", for a bleaching powder and water-softener.

Governmental

Drug Trade Legislation Pends

The opening of Congress has brought with it the introduction of several bills of interest to the drug and toilet goods industry. Among them are:

A bill to extend the provisions of the food and drugs act to advertising of drugs. It would declare drugs to be misbranded if during the preceding six months they has been falsely or deceptively advertised, represented or described in interstate commerce. Introduced by Senator Royal S. Copeland.

A slack-filled package bill to amend the food and drugs act to require that packages containing food be completely filled and that packages be not shaped in such a way as to deceive the purchaser as to the amount of the contents. Introduced by Representative Gilbert N. Haugen.

New Imperial Oblong Line of Owens-Illinois bottles

CHEMICAL
E. C. KLIPSTEIN AND SONS CO.
MANUFACTURERS
REG. U.S. PAT. OFF.

ALUMINUM CHLORIDE ANHYDROUS

HIGHER YIELDS, PURER PRODUCTS and CONSISTENT RESULTS are made possible by the use of this exceptional catalyst in the formation of ketones and other synthetic reactions.

Average analysis indicates 99.5 per cent anhydrous aluminum chloride, less than 0.05 per cent iron, and other metals entirely absent or negligible. It is nearly white in color, has a uniformly high catalytic activity, and is available in graded sizes, including lumps, granules or powder, thus meeting specifically a wide range of requirements. Prompt shipment can be made in 100-pound or 600-pound drums, in quantities up to carloads.

A C. P. grade, pure white in color, can also be supplied.

E. C. KLIPSTEIN & SONS CO., Inc.
CHEMICAL MANUFACTURERS
Sales Office
Empire State Bldg., New York City
Plant
South Charleston, W. Va.

Purity

The U. S. P. X. provides four safeguards for buyers of PETROLATUM LIQUIDUM. They are tests for ACID, ALKALI, SULPHUR COMPOUNDS and CARBONIZABLE substances. ALBINOL Genuine Imported Mineral Oil tests as follows:

ACID NEGATIVE

ALKALI NEGATIVE

SULPHUR COMPOUNDS NEGATIVE

CARBONIZABLE Substances PASSES GOOD

The latter test is probably the most *important.* The U. S. P. X. prescribes in the last named test that the C. P. Sulphuric Acid used in the test must not turn darker than "Pale Amber" and that the OIL remain unchanged in color.

In testing "ALBINOL" the C. P. Sulphuric Acid used does not even approach a "Pale Amber" and except for a "slight haze" *remains the same color as originally.* It is therefore **MUCH BETTER** than U. S. P. A comparative test against other oil is welcomed.

Schliemann Companies, Inc.
53 Park Place, New York, N. Y.

REFINERY IN HAMBURG, GERMANY

Two bills looking to Federal control of the sale of methanol. One to place it under the national prohibition law and prevent its use in food or drink, medicinal or toilet preparation, or radiator antifreeze compound, or its sale for any purpose except under permit and except when bearing a poison label. Introduced by Senator Hiram Bingham.

The other would require interstate shipments of antifreeze containing more than 10 per cent. of methanol to be distinctively colored, contain an emetic, and in less than tank car lots bear a poison label. Introduced by Senator Kenneth McKellar.

The Capper-Kelly bill designed to permit agreements to fix resale prices. Introduced by Senator Arthur Capper and Representative Clyde Kelly.

A bill to place an excise tax of 10 per cent. upon cosmetics, dentifrices and mouthwashes excluded. Introduced by Representative F. LaGuardia.

Food & Drug Seizures

The Federal Food and Drug Administration caused the seizure in December of 168 consignments of foods and drugs found to violate the national pure drug law, says W. G. Campbell, Director of Regulatory Work, Department of Agriculture. The Administration also sent to the Solicitor of the Department cases involving 41 stocks of foods and drugs shipped in violation of the law with recommendations for prosecution of shippers. December actions involved a variety of foods and drugs, including anaesthetic ether, ergot preparations, alleged "cures" for rheumatism and other maladies.

Reports of a survey of District of Columbia drug stores, by officials of the Baltimore Station of the Administration, were announced in December, according to Mr. Campbell. Baltimore station officers visited 100 representative stores and purchased samples requiring the filling of eight different prescriptions. The survey was made to determine the accuracy with which prescriptions are filled by druggists in the District and disclosed the fact that 67 of the 100 prescriptions filled were, in one way or another, unsatisfactory.

According to Mr. Campbell, 37 of the 59 prescriptions for U. S. Pharmacopoeia products were unsatisfactorily filled. Of the 37, 27 contained a considerable excess of active ingredients or were below the tolerance permitted by the Pharmacopoeia. The remaining 10 were excessively short measures. Hearings were held in December and prosecutions are planned.

Drug Trade Alcohol Consumption

During the fiscal year ended June 30, last, there were produced 166,014,346 proof gallons of legal alcohol, a decrease of 25,844,996 proof gallons compared with the output in the preceding year, according to the annual report of Dr. James M. Doran, commissioner of industrial alcohol.

During the year 3,408,890 wine gallons of specially denatured alcohol were used in the preparation of drugs and medical supplies: 133,631 in the manufacture of deodorants and disinfectants; 949,745 gallons in liniments and lotions; 40,956 in dentifrices and tooth paste; 1,271,894 in the production of ether; 314,319 in perfumes; 76,693 in tincture of iodine; 1,486,623 in toilet preparations; and 1,453,231 in toilet waters.

During the year there were withdrawn from warehouses on payment of tax 7,398,519 proof gallons of alcohol, a decrease of 851,962 proof gallons compared with withdrawals in the preceding year. Withdrawals for tax-free purposes—the government, hospitals, and educational institutions—152,172,186 proof gallons, a decrease of 32,588,011 proof gallons from the previous year.

The report reveals also that, during the year, there were withdrawn from bond, free of tax for denaturation 149,303,438 gallons of alcohol and rum, against 181,601,420 gallons for the same purpose in the preceding year.

Conditional Releases to be Stopped

The Food and Drug Administration proposes to discontinue conditional releases of certain crude drugs violative of the food and drugs act, because of excess of foreign matter, according to W. R. M. Wharton, chief of the Eastern District, who called a meeting of interested parties, January 18, to discuss this matter. At the present time, in suitable cases, after proper application, parcels of certain crude drugs violative of the food and drugs act are allowed conditional release for recleaning. The meeting was called as part of the program of study of the present requirements with a view of possible modification working toward the above result.

The administration also held a meeting on the following day for those interested in the importation of olive oil since it is also proposed to discontinue allowing conditional release of this material when the containers are not conspicuously marked with a correct statement of the net contents.

F. T. C. Reports on Chains

The Federal Trade Commission, December 22, made three partial reports on its chain-store investigation to the Senate. The reports contained general information covering the scope of the inquiry, sources of chain store merchandise, and the wholesale business of retail chains.

The fourth and fifth reports were issued later. Contained in the fifth report was specific information regarding "loss leaders" as follows:

"Only four out of 29 groups of items were sold at less than a loss of 10 per cent. below total cost (including operating expenses) by 25 drug chains operating 957 stores during the last week of December, 1928. These four articles are shaving cream, liniments, syrup of figs, and Father John's medicine. The balance of the items show from 10 to 26.2 per cent. loss. They cover a wide variety of merchandise, cigarettes, soaps, ointments, tooth pastes, razor blades, shaving creams, toilet creams, hair tonics, emulsions, lotions, and others. The most frequently reported item is tooth paste, reported 41 times and sold at an average loss of 13.6 per cent. Next is Listerine, reported 20 times with an average loss of 15.1 per cent.

"A number of chains listed their largest selling branded articles, excluding their own private brands, with the lowest selling prices during 1928, together with the net purchase or replacement cost on the same date. It should be noted, however, that the foregoing losses on a replacement cost basis do not necessarily mean that the sales are actually below the prices at which the chains purchased the goods in question.

"For 17 drug chains operating 140 stores, the losses on replacement costs run higher than in grocery or grocery and meat chains. For Palmolive soap, the highest reported loss is 31.4 per cent., the lowest, 16.7 per cent. Other high loss items reported one or more times are Ipana toothpaste, 26.7 per cent.; Kotex, 3.3 per cent. to 20.7 per cent.; Listerine, 4.5 per cent. to 15.6 per cent.; Bayer's Aspirin, 2.8 per cent. to 16.7 per cent.; Feenamint, 18.8 per cent.; Beecham's pills, 25 per cent.; Hind's honey and almond cream, 13.3 per cent. to 23.3 per cent.; Palmolive shaving cream, five per cent to 19 per cent.; Pond's face cream, 8.0 per cent. to 15.8 per cent.; Gillette Razor blades, 3.4 per cent. to 13.8 per cent."

Associations

Bruce Philip Heads A. Ph. A.

American Pharmaceutical Association has elected the following officers for the fiscal year 1932-33: president, W. Bruce Philip, general counsel, National Association of Retail Druggists, Washington; first vice-president, Rowland Jones, Gettysburg, S. D.; second vice-president, G. H. Frommet, Miami.

Drug Section Directors

H. Weicker, Dodge & Olcott Co.; Elmer Hessler, G. S. Stoddard & Co.; C. Leith Speiden, Innis, Speiden & Co.; George Simon, Heyden Chemical Corp.; and S. W. Fraser, Burroughs, Wellcome & Co.; are new directors of the Drug and Chemical Section, New York Board of Trade.

CALCIUM GLUCONATE

The most effective means for combating the common cold and other influenzal infections lies in the development of an adequate alkaline reserve.

The superiority of Calcium Gluconate in the establishment of alkaline reserve is universally recognized and the high quality of Röhm and Haas' Calcium Gluconate, C. P., recommends it especially for this purpose.

Röhm & Haas Co., Inc.

222 W. Washington Square

Philadelphia, Pa.

POWCO BRAND
REG. U.S. PAT. OFF.

Neutral Powdered Soaps
Laboratory Controlled

NEW CROP PERSIAN QUINCE SEED

According to our exacting medium of test our new crop Seed measures up to our high standard of mucilaginous content.

This means that we are again in a position to offer you an intelligent basis upon which to purchase your Quince Seed requirements.

You are primarily interested in buying Quince Seed that has an abundance of clear, water-white mucilage.

Send for samples and compare

JOHN POWELL & CO., INC.

114 East 32nd Street New York, N. Y.

Trade Board Section's Annual Meeting

Drug & Chemical section, N. Y. Board of Trade, held its forty-first annual meeting January 19, at the Drug & Chemical Club, New York. Percy Magnus, chairman of the section, presented a report on the organization's activities during the past year. Other reports submitted were: essential oils, by Fred Watermeyer; manufacturing pharmacists, by Elmer H. Hessler; manufacturing chemists by Victor E. Williams; heavy chemicals, by C. Leith Speiden; legislation, by Dr. Henry C. Lovis; executive committee, report by S. W. Fraser; credit report, by Harry Cunningham, and trucking, by H. A. Brown.

It was also announced that the seventh annual dinner of the section will be held at the Hotel Commodore, March 15.

Those serving on the dinner committee are S. W. Fraser, of Burroughs, Wellcome & Co.; Percy Magnus, of Magnus Mabee & Reynard, Inc., and Gustave Bayer, of Merck & Co. Charles A. Prickett, Frank J. McDonough and Ray Schlotterer are members of the speakers' committee.

Drug Trade Mark List

A list of trade names in use by member firms of the American Drug Manufacturers' Association and the American Pharmaceutical Manufacturers' Association has been prepared under the auspices of the Patent and Trade-Mark Committees of the respective groups. The purpose of the compilation is to furnish information in the preliminary consideration of new trade names. It has been revised to August 1, 1931.

It is the desire of the associations that the booklet receive the widest possible distribution not only among members but among all others interested in this important field, including firms and individuals identified with allied organizations, trade-mark attorneys and association trade-mark bureaus.

Copies may be obtained from Carson P. Frailey, executive vice-president and secretary, American Drug Manufacturers' Association, Albee Building, Washington, D. C., or from Clarence W. Warner, secretary, American Pharmaceutical Manufacturers' Association, care of The Maltbie Chemical Co., 246 High Street, Newark, N. J., at 25c each.

Drug Trade Bureau Elects

Drug Trade of Public Information, Newark, N. J., has re-elected the following officers: president, Ambrose Hunsberger, Philadelphia; secretary-treasurer, H. C. Christensen, Chicago; editor, Dr. Robert P. Fischelis, Trenton. Organizations represented include: American Pharmaceutical Association, Dr. E. F. Kelly and Dr. Robert P. Fischelis; National Association of Retail Druggists, Samuel C. Henry, Ambrose Hunsberger and W. Bruce Philip; National Association of Boards of Pharmacy, H. C. Christensen, A. L. I. Winne and Dr. A. C. Taylor; American Association of Colleges of Pharmacy, Professor E. F. Cook.

Chicago Association Elects

Chicago Perfumery, Soap & Extract Association has elected the following officers for 1932: president, Donald M. Clark, Franco-American Hygienic Co.; vice-president, Louis A. Solo, Solo Laboratories; secretary-treasurer, William H. Schutte, P. R. Dreyer Inc.

N.W.D.A. First Aid Display

National Wholesale Druggists' Association is distributing a very attractive first aid window display for First Aid Week, March 13-19.

Foragers Honor Pope

Frederick J. Pope, publisher of "Toilet Requisites", was honored at the 34th

Frederick J. Pope

annual banquet of the Foragers of America held January 9 at Hotel New Yorker, and attended by about ninety members and guests. The souvenir program of the occasion carried on its cover a reproduction of the cover of the first issue of "Toilet Requisites". A full page picture of Mr. Pope also appeared in the program. Presentation of a piece of den furniture to Mr. Pope was made by Martin Schultes, of Hewitt Brothers Soap Co., Dayton, O., vice-president of the Foragers. Among the other speakers who paid tribute to Mr. Pope were Adam Treu and Louis S. Levy.

Calif. Cosmetic Makers Meet

California Cosmetic Manufacturers and Distributors' Association held its last meeting December 8, at the Pig 'n Whistle Cafe, Hollywood. Speakers were William L. Ware, Domestic Trade Commissioner, Los Angeles Chamber of Commerce, and Robert M. Sampel, Los Angeles Better Business Bureau.

Chemists' Club Employment Service

Chemists' Club, New York, is conducting a free employment service for chemists and chemical engineers under the auspices of a volunteer committee organized by seven chemical societies. Unemployed chemists and chemical engineers are invited to register, whether or not members of any of the societies.

Advertising

Drug Trade Advertising Less

Expenditures for advertising drugs and toiletries in national magazines continued during December to lag behind the total for the corresponding month last year. Farm magazines gained slightly, however, and the most recent available figures covering radio broadcasting over national networks, for November, indicated a very large gain. The figure for December magazines was $2,237,850, 9.8 per cent. under the figure of $2,481,099 registered last year, according to Dorrance, Sullivan & Co., New York. $1,358,628, or 60.7 per cent. of this amount went for beauty preparations and toilet goods, while the remainder was expended for medical and proprietary items. The expenditure in national farm magazines was $54,836, a gain of 6.6 per cent. The total for both types of media was $2,292,686, 9.5 per cent. less than was spent in December, 1930.

For the entire year of 1931, the amount spent in national magazines was $33,267,433, a drop of 4.7 per cent. from the total of $39,919,354 spent last year. In national farm magazines the increase was 3.3 per cent. for the year, from $609,285 to $629,704. The total for the two was $33,897,137, a loss of 4.6 per cent.

Radio advertising during November was 113.3 per cent. greater than it was in November 1930, amounting to $687,009 as compared to $322,105. This brings the total spent for advertising over national networks for the first eleven months of 1931 to $5,404,617, an increase of 189.3 per cent. over the amount spent during the like period of 1930. The total for national magazines, farm magazines, and radio broadcasting was $3,482,170 during November, one per cent. greater than the expenditure during November a year ago, and the eleven-month total for these three media was $37,009,068, an increase of 3.2 per cent. over the amount of $35,851,902 for the first eleven months of 1930.

"Amos n' Andy" Best

Pepsodent Co.'s feature, "Amos n' Andy" was voted the best radio feature in its class in a consensus of radio editors gathered by the New York World-Telegram, receiving 77 out of 132 votes.

Coughs and Colds Still in Season

Exceptional grades of Horehound, Elder Flowers, Linden and Althea Roots and Leaves are ready for prompt shipment. The stocks obtainable from us right now are fresh and test high in therapeutic content. Inquiries for samples and prices cordially invited.

●

Also

Chamomiles
Dandelion Root
Stramonium
Belladonna
Linden (Tillia)
Henbane
Alcanet Root

BLACK FRENCH • INDIAN BLONDE

PSYLLIUM

BY REASON of our first-hand dealings with well-reputed sources of supply and our direct sales (in bulk) to manufacturers and distributors, our Black French and Indian Blonde (Triple Cleaned) Psyllium will be found as attractive in current prices as they are in high quality. Samples and quotations on request.

Already entrenched as a superlative laxative, free from the ill after-effects common to conventional cathartics, other medicinal uses for Psyllium are receiving much attention. Among those of most importance are its therapeutic values in cases of dysentery, diarrhoea, derangements of the digestive organs, catarrh, etc. Alert manufacturers should profit by leadership in developing effective Psyllium remedies.

BAMBERGER BLOCH & LANDESMAN, INC.

35 FRONT ST. NEW YORK, N.Y.

30 Klauzal Ucca - - - Budapest. Hungary.

CAMPHOR SYNTHETIC

Chemically identical with natural camphor

MENTHOL SYNTHETIC

Fine natural odor--white crystals. For lower costs in mentholating mouth washes, tooth pastes, shaving creams, etc.

Thymol U. S. P. — Pure White Crystals

Terpin Hydrate — U. S. P. Powdered and Crystals

Terpineol C. P.

Urea C. P.

Urethane U. S. P.

Products of
Schering-Kahlbaum A. G.
Berlin

SCHERING CORPORATION 110 William Street New York, N.Y.

Sole Import and Sales Agents in the U. S. A. for the Manufacturers.

Stock Carried at New York

New Radio Features

E. Fougera & Co., "Vapex", The Mills Brothers, Mondays and Thursdays at 9 P. M., CBS network.

Scott & Bowne, "Scott's Emulsion", "Adventuring with Count von Luckner", replacing "Tales of the Sea", CBS network.

F. W. Fitch Co., Des Moines, hair preparations, "The Professor", Fridays at 11 A. M., CBS network.

Pompeian Co., toilet preparations, "The Make-Up Box" featuring the Boswell sisters, Monday, Wednesday and Friday at 7.30 P. M., CBS network.

Smith Bros. Uses Comic Strips

Smith Bros., Inc., Poughkeepsie, N. Y., is one of the first of the drug manufacturers to utilize the comic strips of Sunday newspapers for advertising purposes. On January 10, this company sponsored an advertisement of this sort featuring its cough syrup.

Account Changes

August E. Drucker Co., New York, "Revelation" Tooth Powder, to Frank Presbrey Co., that city.

Weldona Corp., Atlantic City, N. J., pharmaceuticals, to Frank Presbrey Co., New York.

Velogen, Inc., New York, skin lotion, to Churchill-Hall, Inc., that city.

C. A. Mosso Laboratories, Chicago, proprietaries, to Gale & Pietsch, Inc., that city.

Norwich Pharmacal Co., Norwich, N. Y., "Pepto-Bismol" and "Unguentine Rectal Cones", to Street & Finney, New York.

Edros Natural Products, Inc., New York, "Edrolax", to Ruthrauff & Ryan, Inc., that city.

Siegelman Laboratories, Los Angeles, cosmetics, to Lockwood-Schakelford Co., that city.

Dentoza Laboratories, Newburgh, N. Y., dentifrice, to Reimers & Whitehill, Inc., New York.

Johnson & Johnson, New Brunswick, N. J., "Modess", to J. Walter Thompson Co., Buenos Aires, for the Argentine only.

National Oil Products Co., Harrison, N. J., "Euthol", a hair preparation, to Charles Dallas Reach, Newark, N. J.

Johnson & Johnson, New Brunswick, N. J., hospital and professional service division, to Ferry-Hanly Advertising Co., New York.

Jean Wallace Butler Laboratories, Chicago, "Buena Skin Tonic", to Erwin, Wasey & Co., that city.

S. M. Laboratories, Inc., Seattle, proprietary medicines, to J. William Sheets, that city.

Financial

Drug Stocks Recover from New Low

Prices of common stocks of drugs and cosmetics companies have improved slightly, after dropping to a new low for 1931 in the week ended December 16, according to the stock price index of the Standard Statistics Company, of New York. A similar trend is seen in the prices of common stocks of 337 miscellaneous industrials. Detailed figures covering both indexes are given below:

	Drugs and cosmetics	*337 Industrials*
1931		
Dec. 9	87.8	56.9
16	82.4	51.4
23	85.0	51.4
30	84.8	51.9
1932		
Jan. 6	84.5	52.2
1931 High	133.8	114.7
Low	84.4	51.4
1930 High	174.7	174.1
Low	115.8	98.2

Earnings and Dividends

AMER. PRODUCTS LOSE

American Products Co., manufacturer of a diversified list of drug and food products under the trade-mark Zanol, has reported a net loss of $41,445 for the fiscal year ended September 30, representing an indicated deficit of $1.46 per common share after preferred dividend requirements. This compared with a net income of $152,258, or 94 cents net per common share, reported in the previous fiscal year. The poor showing was a reflection of the severe business depression prevailing during the year, and was the first unprofitable period of operation in twenty-five years. The balance sheet as of September 30 showed current assets of $710,829, including $228,386 cash and equivalent, while current liabilities were $182,410, leaving an indicated net working capital of $528,419 against $684,019 at the end of the previous fiscal year.

It was stated in the report for the fiscal year that a new and wholly owned subsidiary, Zanol Products Co., had been organized and incorporated under the laws of Ohio on May 20, 1931.

CROWN DRUG STORES

The consolidated balance sheet of the Crown Drug Stores, Inc., as of September 30, indicated a total book value of $1,407,869, excluding $142,258 improvements to leased property and $947,551 goodwill, applicable to 26,002 shares of preferred stock, or $54.14 a share compared with $64.52 per share on 11,272 shares as of July 31, 1930.

EMERSON'S BROMO-SELTZER

Emerson's Bromo-Seltzer, Inc., at a meeting held on December 7, in Baltimore, declared the regular quarterly dividend of 50 cents a share on the preferred and common stock, class A and B, and an extra of 50 cents a share on class A and B common, payable January 2 to holders of record December 15. Joseph F. Hindes, president and chairman of the executive committee, stated that notwithstanding the general depression the profits of the Emerson Drug Company have practically held their own during 1931. He added that it has been the policy to add each year a portion of earnings to surplus, and that as this surplus had reached a point where further additions seemed unnecessary, it was thought proper to make a larger distribution to stockholders.

GALLAHER DRUG CO.

For the fiscal year ended June 30, 1931, the Gallaher Drug Co., Ohio chain drug store operator, reported a net income of $26,854, or $5.37 per share on the combined preferred shares, with nothing available for common stock, as against $26,965, or $5.38 per share on the combined preferred shares in the previous fiscal year.

MEAD JOHNSON & CO. EXTRA

Mead Johnson & Co. has declared an extra dividend of 25 cents per share in addition to the regular quarterly dividend of 75 cents per share on the common stock, both payable Jan. 1 to holders of record Dec. 15. An extra disbursement of 50 cents per share was made quarterly from Oct. 1, 1930 to and incl. Oct. 1, 1931, as compared with 25 cents extra previously.

NORWICH PHARMACAL EXTRA

Norwich Pharmacal Co. has declared a regular dividend of $1 per share and an extra dividend of $1 per share on its capital stock for the quarter ending December 31, and payable on January 1, to stockholders of record at close of business December 20.

NOXEMA CHEMICAL CO.

Noxema Chemical Co. has declared a dividend of $1.50 a share on its capital stock payable January 12 to stock of record December 31. The last previous payment was $1 per share, in July, making total dividends of $2.50 for 1931 as against $2 a share paid in 1930. G. A. Bunting, president, stated that earnings for 1931 have shown about 80 per cent. increase over 1930, while sales were about 36 per cent. larger.

OWL DRUG OMITS

Owl Drug Co. has deferred action on the semi-annual dividend on the 8 per cent. preferred stock. The last payment on this stock was $4 per share on July 1, 1931.

PARKE, DAVIS EXTRA

Parke, Davis & Co. has declared an extra dividend of 20 cents and the regular quarterly dividend of 25 cents a share on its capital stock, both dividends being payable January 2 to stock of record December 19.

PFAUDLER CO.

Pfaudler Co. has declared a quarterly dividend of 1¾ per cent on the common stock, par $100, payable Jan. 1 to holders

BLACK PSYLLIUM SEED
BLONDE PSYLLIUM SEED
KARAYA GUM

Direct shipments from point of origin in lots of one or more tons. Immediate deliveries from our New York stocks. Write or wire for offers.

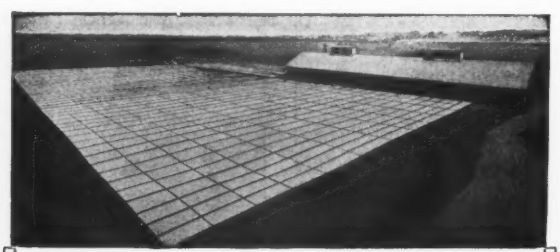
COMPAGNIE NATIONALE DES ALIMENTS NATURELS

27 West 20th St., New York

Cable Address: "Gelschaft," N. Y. Phone: WAtkins 9-7768

Marseille, France
67 Rue de La Palud

Avignon, France
Les Tris 113 Chemin de l'Arrousaire



BEEHIVE BRAND BEESWAX

Absolutely Pure
and
Sun-bleached

Stearic Acid—Red Oil
Glycerine—Ceresine
Spermaceti

WILL & BAUMER CANDLE CO., Inc.
Syracuse, N. Y.

T.L. — SPECIALISTS SINCE 1852 — PIONEER

BEESWAX

Pure
White
Sun
Bleached

Guaranteed under Food and Drug Act of June 30, 1906, Serial No. 4068.

Specify

T. L. BRAND

Sun Bleached under glass from the highest quality crude yellow beeswax obtainable. Especially suitable for the manufacture of toilet preparations of quality, that will keep and not turn rancid or yellow.

PIONEER BRAND---Yellow

THEODOR LEONHARD WAX CO., Inc.
HALEDON PATERSON NEW JERSEY
Long Distance Telephone: ARmory 4-1690

PIONEER — T.L.

of record Dec. 20. Previously, the company paid regular quarterly dividends of 1¾ per cent. on this issue.

FREDERICK STEARNS & CO. OMITS

Frederick Stearns & Co. has omitted the quarterly dividend ordinarily payable about Dec. 31 on the common stock. A distribution of 30 cents per share was made in each of the three preceding quarters.

SQUIBB EXTRA

E. R. Squibb & Sons has declared an extra dividend of 25 cents a share on the common stock, bringing the amount paid this year to $1.50, against $1 paid in 1930. The company reported cash on hand as more than double the amount at this time last year after paying this dividend and after having purchased in the market all the preferred stock needed to anticipate sinking-fund requirements through 1931, 1932 and 1933.

SWANN CORP.

The Swann Corp. has declared its regular quarterly dividend of 15 cents a share payable January 1, 1932, on 506,000 shares of A and B common stock. Earnings to December 1 indicate that after larger deductions for depreciation than for 1930, the net earnings for 1931 will be about 90 per cent. of last year's earnings.

WEINBERGER DRUG STORES, INC.

Weinberger Drug Stores, Inc. has declared a quarterly dividend of 25 cents a share and a semi-annual dividend of 2 per cent. in stock on the common stock no par value, payable Jan. 2 to holders of record Dec. 21. On Oct. 1 last a quarterly dividend of 25 cents a share was made on this issue as compared with 25 cents in cash and 1 per cent. in stock previously each quarter.

Obituaries

George A. Randolph

George A. Randolph, former advertising manager, Paris Medicine Co., St., Louis, died January 2, at his home near Charlottesville, Va.

Paul Watkins

Paul Watkins, president, J. R. Watkins Co., Winona, Minn., flavoring extracts and household medicines, died at his home in that city December 24, aged 67. He was born in Lebanon, Ohio, November 9, 1864, and had been associated with the company for forty years, going to Winona in 1892 to join his uncle, the late J. R. Watkins, who founded the company sixty-three years ago. He acted as vice-president of the company until 1911, at which time he was elected president and became the leading factor in promoting the growth of the company's enterprises. He was widely known for his philanthropic and civic activities and as a patron of the arts and sciences. He was also a director in a number of corporations and a member of many clubs and organizations.

Gustav Von den Steinen

Gustav Von den Steinen, president, The Glascote Co., Euclid, Ohio, died at his home in Cleveland on Saturday morning, December fifth, of a paralytic stroke following a heart attack.

More than a year ago his health began to fail and the active management of company was entrusted to an executive

Gustav Von den Steinen

committee, consisting of Fred B. Morris, George H. Hamlin and Chas. H. Stone. Under the direction of this committee the company has made marked progress, and the passing of Mr. Von den Steinen will in no way affect the financial or operative standing of the business.

Mr. Von den Steinen was born in Newark, N. J., but at an early age was brought to Cleveland, where his parents had formerly resided. He was one of the founders of The Glascote Co., and, after its organization, served as vice-president. In April, 1929, he was elected president and continued in this office until the time of his death.

L. R. Hardenbergh

Lewis Randolph Hardenbergh, president, Nestle's Milk Products, Inc., New York, manufacturer of special foods for infants and invalids, died December 15, aged 53.

John W. Forbing

John W. Forbing, chemical engineer and laboratory technician for the Bayer Co., Rensselaer, N. Y., died in Albany, December 17, aged 53.

Frederick W. Lyman

Frederick W. Lyman, pioneer wholesale druggist of Minneapolis, died in Pasadena, Calif., December 22, aged 82. He was responsible for the organization in 1875 of the Lyman-Eliel Drug Co., the first wholesale drug company in Minneapolis, now known as the McKesson-Minneapolis Drug Co.

Arthur S. Somers

Arthur S. Somers, president, Fred L. Lavanburg Co., Brooklyn, N. Y., dry colors, died at his home in Brooklyn, January 6, aged 66. In addition to his long years of association with the drug and chemical industry, he was a prominent figure in civic and financial circles.

He was born in New York, January 26, 1866 and entered the employ of Pfeiffer

Arthur S. Somers

& Lavanburg in 1886. The firm later became Fred L. Lavanburg Co. and in 1916, he became vice-president and treasurer, and, after the death of Mr. Lavanburg, owner and president of the company.

He held innumerable positions of responsibility in various business, civic, charitable and financial institutions. With the exception of a brief period when he served as civil service commissioner, he had served on the Board of Education of the City of New York ever since its formation and at intervals had been its vice-president and president. He had also been president of the Drug and Chemical Club of New York and of the National Paint, Oil & Varnish Association.

William S. Lyon

William S. Lyon, formerly traffic manager, Church & Dwight Co., Inc., New York, and for the past seventy years associated with that company and its predecessor company, John Dwight & Co., died in Washington, D. C., December 22, aged 88.

Charles D. Daniel

Charles D. Daniel, president, Toronto Pharmacal Co., Ltd., died at his home in that city, December 19, aged 73. He was a member of the Canadian Pharmaceutical Manufacturers' Association and of the Toronto Board of Trade.

William F. Cochrane

William F. Cochrane, assistant to the president of and since 1918 associated with, the U. S. Industrial Alcohol Co., died at his home in Baltimore, January 5, aged 45. He was born in Steele, N. D., in 1886.

New Incorporations

International Research Corp., New York City, drugs—B. Tannenbaum, 521 Fifth Ave., $10,000.

Konjola, Inc., New York City, drugs—Corporation Trust Co., $100,000; 3,500 shares common.

Carbyte Corp., New York City, chemicals—J. F. McCaffrey Jr., 545 Fifth Ave., 200 shares common.

Dyana Chemicals, Lockport, N. Y.—Moore & Jeffrey, Lockport, 200 shares common.

Drugkraft, New York City, chemicals, cosmetics—I. F. Becker, 233 Broadway, $10,000 preferred, 100 shares common.

Ray Sales Co., New York City, drugs—S. D. Taneloff, 11 Park Place, $10,000.

Charles Dorn, New York City, cosmetics—Attorneys' Albany Service Co., 299 Broadway, $20,000.

Coffo Manufacturing Co., Atlantic City, N. J., manufacture beauty preparations, especially Lapaz Products—Louis I. Kravitz, Atlantic City, 2,500 shares common.

Sealand Process Corp., New York City, chemical solvents—S. V. Ryan, Albany, N. Y., $30,000.

Arctic Chemical and Combustion Engineering Corp., New York City—J. P. Nolan, 60 Broad St., 200 shares common.

A. G. Syrup Co., Bronx, N. Y., Favoring extracts, etc.—M. M. Bornfreund, 305 Broadway, New York City, $20,000.

Towns & James, Brooklyn, N. Y., drugs—Watson, Kristeller & Swift, 68 William St., New York City, 5,000 shares common.

Peroxotone Laboratories, New York City, chemicals—L. H. Robinson, 475 Fifth Ave., 50 shares common.

S. B. Penick & Co., New York City, druggists—United States Corp. Co., $500,000.

Endo-Zime Corp. of America, New York City, drugs—A. L. Feinstein, 1540 Broadway, $10,0000.

The Seneca Co., Inc., Philadelphia, Pa., lotions, oils, beautifying materials—Corporation Guarantee and Trust Co., 1,000 shares common.

Pacific Products Co., Wilmington, Del., soaps, soap substitutes—Corporation Service Co., $25,000.

Oleothesin Co., Buffalo, N. Y., druggist business—C. A. Hand, 120 Broadway, New York City, $20,000.

Buermann Laboratories, Inc., Lakewood, N. J., manufacture chemicals—Jayne & McCloskey, Lakewood, $25,000.

Byr-Zim Co., Rochester, N. Y., cleaning chemicals—W. J. Bell, Rochester, $10,000.

Michel Degypte, New York City, cosmetics—S. Fine, 165 Broadway, 100 shares common.

Obesity Research Bureau, New York City, medicine—E. R. Kayes, 36 West 44th St., $27,000.

Southern Drug Stores, Inc., Wilmington, Del.—Colonial Charter Co., Dover, Del., $250,000; 2,500 shares common.

Flavor Products Co., Philadelphia, Pa., vegetables, fruits, extracts, drugs—Capital Trust Co., Dover, Del., $10,000.

Hungarian Insulin

Compulsory use of Hungarian-made insulin and all insulin products by all government-owned or subsidized institutions has been ordered by the Hungarian Minister of the Interior, according to the Department of Commerce.

Only the products of the Chinolin Company, Ujpest, and the G. Richter Chemical Works, Budapest, may be considered Hungarian-made. These factories manufacture insulin and insulin products, claimed to be equal in quality to, and lower in price than, foreign competitive brands. An official committee has been created to examine the national output.

Ampul Marking

Empty glass ampuls, when imported, must be marked "Glass manufactured in (country of origin)", according to instructions given by the Bureau of Customs with a view of avoiding the possibility of mishandling under the food and drugs act by the appearance of "Made in Germany" on ampuls filled with a medicinal preparation made in the United States.

HUISKING

CAMPHOR--MENTHOL

COD LIVER OIL

PEDER DEVOLD BRAND

(Trade Mark Registered)

Highest Grade Medicinal

Practically free of odor and taste.

Richest in Natural Vitamins.

Acid Citric
Alkaloids
Charcoal, "Ellis" Willow
Cinchona Bark
Thick Quills
Cocoa Butter, U. S P.
Gelatine "Pure Food"
Haarlem Oil--
"Klaas Tilly"
Kamala
Lithol
Manna
Mannite
Quicksilver, Virgin
Saffron, American
Spanish
Sal Ammoniac, Lump
Santonine, U. S. P.
Quinine Bisulfate
and Sulfate
Sulfur, Precip. U. S. P.
Thymol
Witch Hazel
Zinc Oxide, Hubbuck's

CHAS. L. HUISKING & CO., Inc.

155 Varick Street New York City

THREE ELEPHANT

BORAX

BORIC ACID

Stocks carried by the following distributors:

A. Daigger & Co.,
Chicago, Ill.
Detroit Soda Products Co.,
Wyandotte, Mich.
Arnold, Hoffman & Co.,
Providence, R. I. Philadelphia, Pa.
Thompson Hayward Chemical Company,
Kansas City, Mo. St. Louis, Mo.
Marble Nye Co.,
Boston, Mass. Worcester, Mass.
Innis, Speiden & Co., New York, N. Y.

In Canada
St. Lawrence Trading Company, Ltd.
Montreal, Toronto and Vancouver

American Potash & Chem. Corp.

WOOLWORTH BUILDING NEW YORK CITY

Aspir-Gran
and
Acetyl Salicylic Acid Starch Granulations

MANUFACTURERS of Aspirin tablets and compound tablets containing Aspirin appreciate the advantages of Monsanto Acetyl Salicylic Acid. Whether as ASPIR-GRAN or starch granulations (white, pink or green) the Monsanto forms of Acetyl Salicylic Acid eliminate the necessity of granulating and produce superior tablets.

ASPIR-GRAN is the original free-flowing crystalline form of Aspirin. Introduced by Monsanto in 1923, it has been improved during the succeeding years and is today preferred by many leading manufacturers.

Insist on a Monsanto form of Acetyl Salicylic Acid » » either ASPIR-GRAN *or the starch granulations will meet your every requirement.*

Other Monsanto Medicinals Include:

ACETPHENETIDIN — CAFFEINE
ACETANILID — PHENOLPHTHALEIN
CHLORAMINE — GLYCEROPHOSPHATES
AND A FULL LINE OF SALICYLATES

Manufactured by
Monsanto Chemical Works
St. Louis, U.S.A.

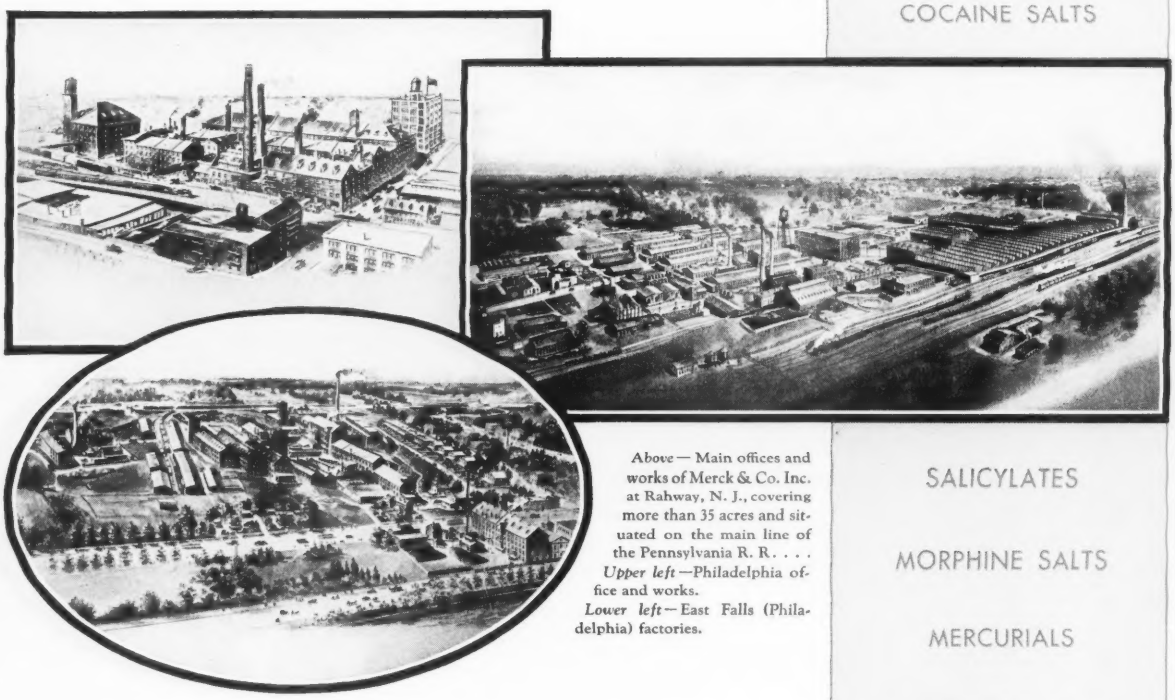
Export Sales Office: Everett Station, 500 Nb Fourteen, 17 Battery Pl., NEW YORK — BOSTON — CHICAGO — SAN FRANCISCO
Warehouse Stocks at: [illegible]

Monsanto Chemicals

The HOUSE *of* MERCK

QUININE
ETHER

COCAINE SALTS



Above — Main offices and works of Merck & Co. Inc. at Rahway, N. J., covering more than 35 acres and situated on the main line of the Pennsylvania R. R. . . . *Upper left* — Philadelphia office and works. *Lower left* — East Falls (Philadelphia) factories.

SALICYLATES

MORPHINE SALTS

MERCURIALS

STRYCHNINE

IODIDES

CODEINE SALTS

BISMUTH SALTS

SILVER SALTS

CHLORAL HYDRATE

PHENOBARBITAL

RARE ALKALOIDS

ETC., ETC.

Merck & Co. Inc. is built on foundations that extend to the very beginning of modern industrial and pharmaceutical chemistry. . . The name of Merck has long been associated with Fine Chemicals, and many of the foremost commodities of today were first manufactured by one or another of the early pioneers who have since become part of the modern house of Merck. . . Dating from 1823, when American quinine was first manufactured by one of these pioneers, there has been, year by year, a memorable succession of new manufactures with which the names Merck, Rosengarten, Powers and Weightman are all identified. . . Today over 3000 chemicals are included in the Merck line. . . All conform to definite, established standard.

. . . Write for complete list. . .

MERCK & CO. INC.

MANUFACTURING CHEMISTS

Industrial Division: Philadelphia

Rahway, N. J.

New York St. Louis

MERCK & CO. LTD. Montreal

Drug Markets

A review of conditions affecting markets and prices of the chemicals, aromatics, essential oils, crude drugs and other raw materials purchased by drug and cosmetic manufacturers, together with an alphabetical list of current market prices.

This section also contains a condensed review of new patents and abstracts of particular interest to the chemist and those in charge of technical control.

Alcohol Firmer

The beginning of the new year finds the alcohol market in a much firmer position. The new, and higher, alcohol schedules are in force and are on a basis that, it is reported, will be productive of a moderate profit to the producers. The new schedule on the principal formulae are as follows:

Formula	*Carloads in Drs.*	*1-4 drum lots*
No. 1 Spec.	.335	.415
No. 5 Comp.	.345	.425
No. 23A Spec.	.37	.49
No. 39B "	.395	.515
No. 40M "	.34	.46

These prices are f. o. b. producing points, the actual freight to be added to point of destination. Drums are included in the price and are not returnable. These prices were effective on all shipments after the first of the year and will be in force until March 31, namely for three months.

It is somewhat early as yet to state how the trade has reacted to the higher prices at this time as the majority of buyers have ordered in the full allotments permitted under contracts that expired with the month of December and therefore availed themselves to the full of the lower prices prevailing at that time. Most consumers are therefore well supplied for the time being. Under the cirsumstances it is reported that not many new contracts have as yet been written and shipments for the first two weeks of the new year were nominal. This condition, however, was expected and has had no untoward effects on the market as the consuming trade has been well educated to the absolute necessity for the higher alcohol schedules.

Iodide Price Cut

A sharp reduction was the feature of the market for potassium iodide during the past month. Leading producers here dropped their price 25c per pound to the basis of from $3.25 to $3.30 per pound. It is said that the reduction was forced by severe competition from the imported material in that Japanese potassium iodide was offered in this market at a low figure. The decline in Japanese exchange put Japanese iodides in a favorable position. An increasing domestic output of crude iodine has made it possible to offer this material at lower prices and this has also had its effect on the cost of potassium iodide.

Citric Acid Lower

Domestic producers of citric acid have reduced their prices during the past month 1½c per pound. Spot stocks are now offered on the basis of 33½c per pound for U. S. P. crystals with U. S. P. powdered being offered at 34c per pound. Although these prices are reported to be the lowest in many years the market is still very competitive and the situation continues unsettled.

A Department of Commerce report states that Belgium continued to show an increase during 1931 in their production of citric acid as shown by the increase of their exports to the United Kingdom and Germany, their largest customers. During the first 9 months of 1930 Belgium sent to the United Kingdom 4,000 kilos valued at 124,000 Francs and in the same period of 1931, 213,600 kilos valued at 3,777,000 francs. During the first 9 months of 1930 Germany purchased no citric acid from Belgium but during the first 9 months of 1931 71,300 kilos valued at 1,425,000 francs was purchased.

Mercury Still Declines

The deflation in the price of mercury does not as yet seem to have run its course. During the past month a further reduction of $1 per flask has been noted in the spot market which is now on the basis of from $66 to $67 per flask with reports current that $65 could be done in a round way. A small and fluctuating consumer request has kept the market in a highly competitive condition.

The extreme weakness in this commodity might be said to have started with the decline from the high price of $120 that prevailed in June, 1930, as from that time onward the declines have been rapid and practically uninterrupted. In 1930 for the first time in many years the price of American-produced mercury fell below the European price plus the cost of importation. The result of this has been that this market is now dominated almost entirely by the domestic material.

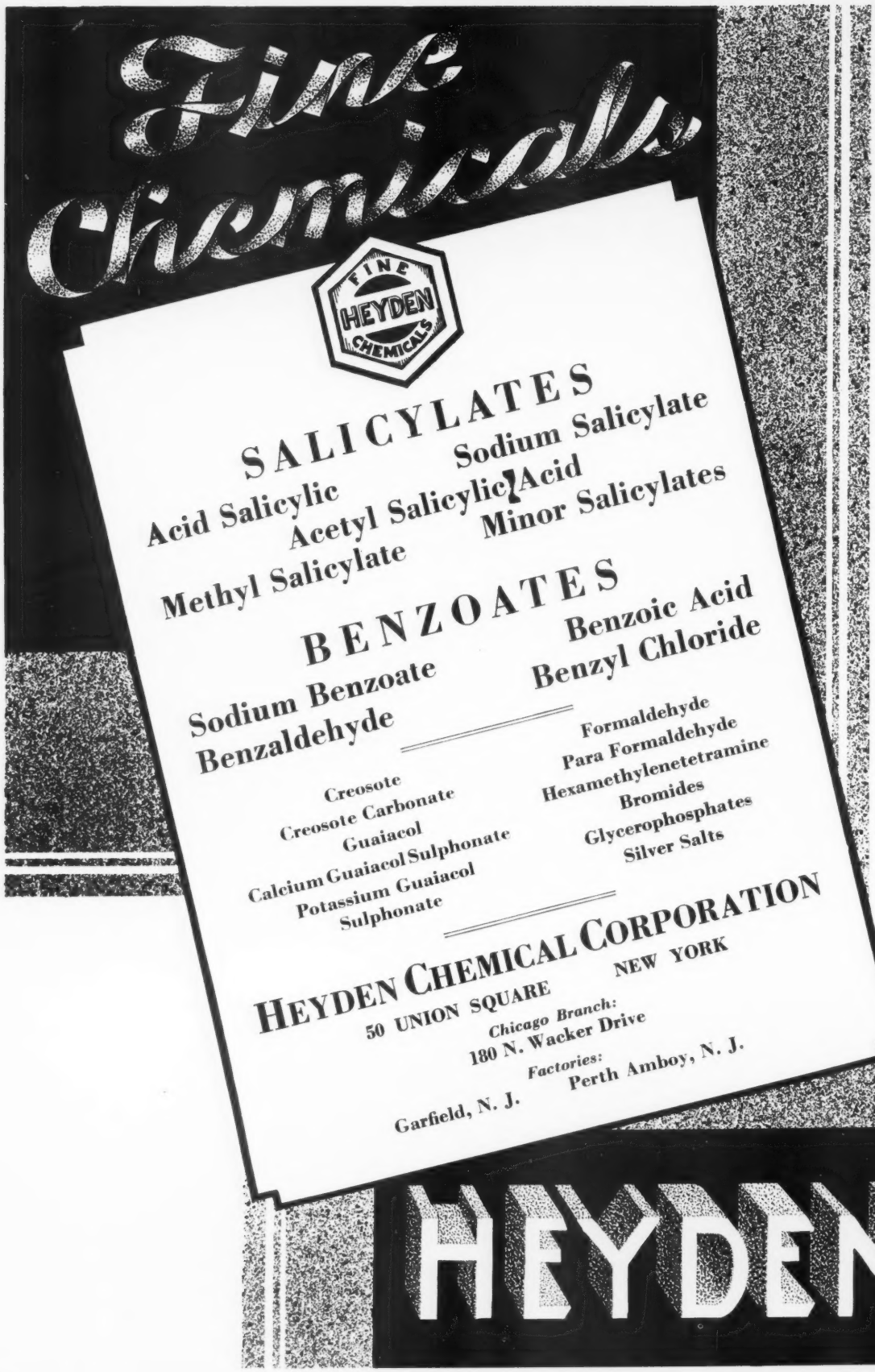
Imports of mercury for consumption in 1931 amounted to only 150 flasks and it is believed that this lot was bought by the importer for his own account following the first price cut by the monopoly. In 1930 imports amounted to 3,725 flasks, valued at $361,810, as compared with 14,917 flasks valued at $1,513,197 in 1929 and a recent maximum of 25,634 flasks valued at $1,784,250 in 1926.

The production of mercury in the United States in 1930 amounted to 21,553 flasks of 76 pounds each; the calculated value of this production, based upon the average New York quotation during the year, was $2,478,789. Due to the disturbed state of general business as reflected in occasional inability to dispose promptly of the product, shutdowns tended to interrupt production, and the quantity produced in 1930 was 9 per cent. less than that produced by domestic mines in 1929. It was substantially greater, however, than in any year from 1919 through 1928. Moreover, the number of producing mines increased to 75 in 1930, from 63 in 1929 and only 13 in 1925.

The tendency in production, however, is again downward as the number of mines operating are on the decrease due to the prevailing low cost of the material. The estimated 1931 consumption is put at about 18,000 flasks and it is said that production during 1931 will closely approximate this figure.

Mercurials Down

Owing to the continued downward trend in mercury, leading makers of the salts have announced a further reduction in prices extending from 6c to 8c a pound. Mercury bichloride crystals are now offered at $1.08 per pound and the granulated powdered at 93c per pound. Calomel is offered at $1.51 per pound, red precipitate $1.64 and white precipitate $1.59 per pound respectively. Other mercurials remain unchanged.


Fine Chemicals
FINE HEYDEN CHEMICALS
SALICYLATES
Acid Salicylic
Sodium Salicylate
Acetyl Salicylic Acid
Methyl Salicylate
Minor Salicylates
BENZOATES
Sodium Benzoate
Benzoic Acid
Benzaldehyde
Benzyl Chloride
Creosote
Creosote Carbonate
Guaiacol
Calcium Guaiacol Sulphonate
Potassium Guaiacol Sulphonate
Formaldehyde
Para Formaldehyde
Hexamethylenetetramine
Bromides
Glycerophosphates
Silver Salts
HEYDEN CHEMICAL CORPORATION
50 UNION SQUARE NEW YORK
Chicago Branch:
180 N. Wacker Drive
Factories:
Garfield, N. J.
Perth Amboy, N. J.
HEYDEN

Cod Liver Oil Off

Lower prices continue to prevail in the spot market for cod liver oil. Quotations are on the basis of from $23.50 to $25 per barrel according to brand and seller with reports current that some outside lots have been offered ay concessions. The statistical position of the market is still firm but demand has not been in sufficient volume to lend support to the market.

Cod liver oil production in Newfoundland for medicinal purposes picked up in 1931 from its low figure for 1930. It was expected to reach 150,000 Imperial gallons (1.2 U. S. gals.). Carryover of 1930 stocks was all consumed in 1931, and there has been a steady demand for all the new oil obtainable. Prices have not increased or, it is stated, are they likely to do so unless there should be a shortage in the Norwegian catch of cod fish which begins shortly after the opening of the year.

Menthol Dull

The menthol market remains without new feature on spot with prices quoted during the past month being maintained on the basis of from $3.25 to $3.45 per pound as to quantity. Trading is restricted to small lots and at a figure nearer to that at which futures were sold.

The situation in the primary market continues firm with reports that Japan has advanced prices in Yen in proportion to the decline in the exchange in that country thereby keeping steady the net cost of further importations.

It is reported in one quarter that the small amount of business being done on spot is due to the fact that about 90 per cent. of the larger manufacturing consumers have already been covered for next year. The tendency on the part of the larger buyers has been to cover their requirements for a period of from three months to a year with the result that the day to day demand for the article is made up from only the remaining 10 per cent. and is likely to remain so.

Consul Howard Donovan, Kobe, reports in Department of Commerce bulletin that the output of crude peppermint oil in Japan for 1931 is estimated at 1,180,000 pounds, of which 235,000 pounds came from Honshu and 945,000 pounds from Hokkaido. The output in Hokkaido was somewhat less than previous estimates, which placed the production in that section at 1,040,000 pounds. Insect pests accounted for the decreased yield. The price of crude peppermint oil at Kobe on October 10 was 3 yen ($1.50) per kin (1.32 pounds), which is unusually low. Menthol crystals on the same date were quoted at 5 yen ($2.50) per kin, which was the lowest price known in Kobe during the past 15 years. The drop in price was attributed to the collapse of European exchanges. Stocks of crude peppermint oil in Japan were large at the close of September, amounting to about 200,000 pounds as compared with 195,000 pounds at the end of June, 1930.

Camphor

Although importations of camphor during 1931 were greatly in excess of importations during 1930 the market seems to have absorbed the larger importations without unsettlement. A good volume of business is reported in the spot market and prices remain firm. Japanese refined slabs are quoted at from 49c to 50c per pound, refined powdered 49c to 50c per pound and tablets at from 62c to 63c per pound.

A Department of Commerce report states that during the first 10 months of 1931, the United States imported 2,793,000 pounds of natural camphor valued at $1,119,000, as compared with 1,656,800 pounds valued at $789,300 in the corresponding period of 1930. Imports of synthetic camphor increased in quantity but declined in value from 1,568,800 pounds worth $554,500 during the 1930 period to 1,668,200 pounds worth $546,000 during the first 10 months of 1931.

Iodine Unsettled

The iodine market, although remaining without price feature, is reported unsettled due to the cheapness of Japanese iodine and the enlarging production of crude by the salt and petroleum companies in this country. Crude is now quoted at $3.89 per pound and resublimed at from $4.65 to $4.70 as to quantity.

Iodine extracted from natural well waters in Italy, a recent development, is said to have made that country virtually independent of foreign sources. It is reported that there are 17 wells in the vicinity of Salsomaggiore and on the edge of the Paduan basis, some of which have a depth of 700 meters and are rich in mineral content. A plant is being erected at Monticelli Bagni, near Parma, for the production of iodine and bromine from natural waters.

Tartaric Competition

A keen competitive condition exists in the market for tartaric acid. Domestic producers have reduced quotations 1c per pound and are now offering at from 25½c to 26½c per pound as to quantity. This has not come upon the market as a surprise due to the considerable quantities of material offered from abroad at attractive prices.

Mineral Oil Exports

White mineral oil exports in the first 10 months of 1931 were almost as large in volume as for the whole year of 1929, the totals for the two periods being 251,435 gallons and 260,489 gallons, respectively. The average gallon price dropped from $1.73 to $1.13, bringing down the total value of these exports from $450,236 in 1929, to $284,310 in November 1, 1931.

Agar Steady

Agar agar is meeting with a fair sale at prices that continue unchanged from the basis of $1.05 to $1.10 for No. 1 with No. 2 being offered at $1. Stocks here, however, are reported as plentiful due to larger importations during the past year which the increase in the sale of this commodity for various psyllium seed preparations has not been entirely able to absorb.

Consul E. R. Dickover, Kobe, reports that imports of agar agar from Japan during the first 10 months of 1931 amounted to 475,800 pounds valued at $306,500, as compared with 362,400 pounds valued at $281,500 during the corresponding period of 1930. There are two principal divisions of agar agar production in Japan, the Kansai division, exporting from Kobe, and the Shinshu division, exported from Yokohama. The Kansai agar agar is produced in the mountainous districts back of Kobe and Osaka, while the Shinshu agar is produced in Nagano Prefecture.

Purchases of raw material to date by producers of Kobe quality agar indicate that this year's production will be about 70 per cent. of last year's, or about 650 short tons. High prices of seaweed accounted for the smaller purchases by manufacturers. Some 50 village associations of agar producers recently discussed the possibility of curtailing production but no definite action was taken. Exports of agar agar from Kobe during the third quarter of 1931 amounted to 214,000 pounds valued at $144,000 as compared with 748,818 pounds valued at $646,500 during the preceding quarter. During the first nine months of 1931 agar agar exports from Kobe amounted to 2,297,000 pounds valued at $1,461,000.

Glycerine Quiet

The past month has seen a very dull market for glycerin. It is reported that business has fallen off considerably but that this condition is usually experienced during the month of December and has therefore occasioned the producers no uneasyness. Stocks are entirely sufficient to take care of any unexpected spurt in activity that may develop. Crude is offered quite freely with the tendency to shade quotations. The fact, however, that spot market quotations for refined glycerin have remained steady at the prevailing market price of 11¼c per pound leads the principal producers to look toward 1932 with optimism.

Digitalis Leaves at 10c

Sales of digitalis leaves have been reported made at 10c and 11c per pound the latter part of last month, thereby closing the year at its low point. The market is still unsteady and subject to competition as it would seem that holders are supplied with more than the average amount of stocks.

PLAIMAR

(REGD.)

SANDALWOOD OIL

Official in the French Codex

DISTILLED BY

PLAIMAR, Ltd.

PERTH, W. A.

TO PROTECT YOURSELF AND US LOOK FOR THE

PLAIMAR

SEAL ON EVERY TIN

Pronounced Therapeutically Equal to Oil of Santalum Album and Physiologically Superior.

LIMITS OF ANALYSIS:

Sp. Gr. @ 15.5°	0.968 to 0.975
Opt. Rotation $_{AD}$	-4° to -16°
Alcohol as Santalol	90% to 95%
Solubility in 70% Al.	1 in 3 to 1 in 6 Vols.

American Agents:

THE IMPERIAL EXPORT COMPANY, Inc.

11 Moore Street — New York, N. Y.

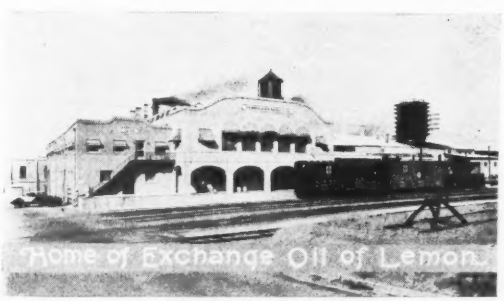
Telephone: Whitehall 7622

LOOKING AT LEMON OIL

From The Dollars And Cents Angle...

What Lemon Oil does and how it does it after all determines its value as a flavoring agent . . . . .

For unequalled performance Exchange Lemon Oil excels . . . USE IT.



Exchange BRAND

Sold to the American market exclusively through:

DODGE & OLCOTT COMPANY
180 Varick Street
New York City

FRITZSCHE BROTHERS, INC.
78-84 Beekman Street
New York City

PRODUCTS DEPARTMENT

CALIFORNIA FRUIT GROWERS EXCHANGE

ONTARIO, CALIFORNIA

Peppermint Eases

The strength displayed by peppermint in the primary market as reported in our columns a month ago does not now seem so prevalent. It was said that stocks there are far too large to permit any important advance in quotations. Open quotations have not been lowered in the market but the absence of any important buying has to that extent weakened the position with the result that some shading has been resorted to.

Croton Oil Down

Oil croton has been further reduced during the past month to the basis of from $3.60 to $4.00 per pound. As this is a small item it was said that dealers found that the article had been selling out of line in comparison with other oils.

Spike Oil Remains Firm

Spike lavender oil continues in the firm position it attained when it became generally known that a short production resulted from unfavorable conditions during the distillation season. Extra high quality oil is offered at 75c per pound with the ordinary grade ranging down to 50c per pound. It is reported that there is a tendency on the part of a number of consumers to seek material of the better quality.

Anise Oil Lower

The expected improvement in the demand for anise oil has not as yet materialized. Buyers, it is said, have been shopping more than usual for this oil and as a result have caused an easier tendency to develop. U. S. P. oil is therefore down to from 39c to 41c per pound with the technical grade offered at from 37c to 39c per pound.

Distilled Lime Oil Down Again

The decline in distilled lime oil does not as yet seem to have run its course as a further reduction of 30c per pound is noted during the past month. The spot market is now on the basis of from $7.70 to $8.70 per pound as to quality desired. An ample supply of oil is on hand when the small current demand is considered. Expressed is steady and in light demand.

Mustard Oil Down Sharply

True oil mustard, which is never a very active oil, has been sharply reduced to the basis of from $8.50 to $9.00 per pound, representing a decline during the month of $1 per pound. This decline is attributed to lower cost of production and the general tendency of the oil markets.

Citrus Oils Dull

The citrus oils, lemon and orange, are without new feature. A steady undertone prevails at the price levels which these oils have reached. A routine request, characteristic of this season of the year prevails for both oils.

Spot stocks of orange oil to be carried over into the new year are reported as not over-large but under present call ample to meet the requirements of the near future. This applies also to lemon oil.

Consuls at Palermo and Messina report that production of lemon and orange oils in Italy has remained curtailed owing to low prices. Several factories remained closed. Stocks of lemon oil were considered ample but orange oil supplies were negligible.

Mysore Sandalwood Declines

At commencement of negotiation of new contracts on Mysore label sandalwood oil, the agents of the Mysore Government in this country announced a reduction of 50c per pound in their schedule of prices and are now generally offering the commodity at $7.25 per pound. This new schedule was arrived at after a visit of the Mysore Government Trade Commissioner to their agents here.

The competitive condition from other U. S. P. oil distilled in this country from sandalwood obtained from provinces other than the Mysore Province is still keen in that this oil is offered for sale at the official schedule of $6.50 per pound. There are indications in the market, however, that this grade of U. S. P. oil is shaded from the $6.50 level.

Bergamot Oil Steady

Oil bergamot closed the year showing a steady tone although it is not generally expected that the immediate future will show higher prices as the New York market is said to be in possession of considerable oil.

Although the period just past was one of prolonged inactivity, the renewed strength of the primary market as displayed in the recent activity of the consortium of bergamot producers has had a stabilizing effect on the market and prevented this oil from seeking lower levels in sympathy with the decreased demand and the general tendency of the essential oil market.

A late report from Commercial Attache Mowatt M. Mitchell, Rome, states that the formation of a Consortium among bergamot producers and establishment of a general warehouse at Reggio Calabria under Royal Decree Law of March 30 and October 23, 1930, the object of which was to aid the bergamot industry by checking over production and reputed adulteration through standardization and more regular trade in the product, is reported to have been less effective than was hoped, owing to voluntary, rather than obligatory, membership. For this reason Royal Decree Law of October 15, 1931, was enacted making membership obligatory and authorizing fines and confiscatory measures for producers who fail to deliver their oil of bergamot to the Consortium.

Natural oil bergamot is offered in the spot market at from $1.90 to $2.10 per pound as to quality.

Wormwood Oil Steadier

Wormwood oil is steady after the severe and prolonged weakness that has prevailed during the entire year just past. From $3.85 to $4.10 per pound is generally quoted. When the price of from $6 to $7 that prevailed at the beginning of 1931 is considered, it can readily be seen that the production of this oil is uneconomic at present levels and will probably result in further curtailment.

Essential Oil Production

The Bureau of the Census reports that 22 plants in the United States produced $6,653,000 worth of essential oils during 1929, of which 67.3 per cent was sold to industrial consumers, 19.8 per cent to wholesale dealers, 3.7 per cent to retailers, and 9.2 per cent to manufacturers' own wholesale branches.

Clove Oil Easier

Clove oil is easier in the spot market at from $1.05 to $1.10 per pound. These lower quotations were generally expected in the trade due to the arrival of lower cost spice from which this oil is produced.

Balsam Peru Easy

Balsam Peru has developed an easier tone with the market now on the basis of from $1.10 to $1.15 per pound. A price of 95c per pound has been reported as having been done but this is said to be so close to the cost of replacement that it had later been withdrawn and the higher figures are now more generally quoted.

Dandelion Market Soft

Dandelion root continued unchanged from scheduled prices of from 11c to 12c per pound but competition is said to have weakened the market to the extent that shading from these levels was noticed. This competitive factor was due to the fact that some quarters have more stocks than they care to carry along with the result that the easy undertone is attributed to these sources. The balance of the trade, however, held the market price unchanged but were disposed to meet the competition where it was encountered.

"V-C" PERFUME BASES

THE inherent possibilities of our Vidal-Charvet Parisian bases command the attention of the perfumer anxious to supplement his line or modernize his present products.

BY those who have adopted them, the "V-C" products are considered indispensable---- a reputation founded on their proven merits. A diversified odor-range is offered, the following being among the most popular:

Florarome
Ambreine
Rosezone
Iriszone
Violflora
Muriena
Adastra
Chypre
Lysis

Bigaradia
Sweet Pea
Miosotys
Narcisse
Poncella
Fougère
Odanol
Zarvia
Lilac

Novel! *Reasonably Priced!* *Modern!*

UNGERER & CO.
15 West Twentieth St.
NEW YORK
Toronto *Canada*

Grasse Essential Facts

By O. C. Zilisch

UNUSUALLY cold weather, as predicted in the previous report, has been the rule in the Southern part of France, including the Grasse region, although no particularly bad damage has been caused, according to those who would be most affected. The mimosa did suffer some, as the cold weather in certain districts was severe. In the mountainous districts of Southern France the mercury went down to 18 below zero, Centigrade, this being very cold weather even for sections like this. Naturally, many of the people who went to the Côte d'Azur for the warmth there were slightly disappointed during the last weeks of December. Since the first of January, however, the weather has taken a turn for the better, and the report is now that the early violets, because of this sudden veering around, will be ready for harvesting earlier than usual.

It was feared that the orange flower trees had been nipped again seriously, but there is nothing of great importance to report along these lines. Some of them were, no doubt, touched somewhat by the cold weather, but nothing to compare with the cold season of several years ago. Predictions by the weather department in France are to the effect that still colder weather is coming, making the growers in the Grasse region wonder whether or not they are in for another drubbing. There are some, of course, who feel that a cold spell of severe proportions would serve to clear up the crisis that has existed in the region for the past several years. At any rate, all preparations are being made to keep the cultures protected against any sudden change in temperature, a condition that may be expected at this season of the year. Practically half of France is covered with snow, snow having made its appearance in this very temperate region early this year. All around Paris, within a few kilometers, there is snow, only Paris having escaped any downfall of importance so far.

Gathering of the ancient cassia proceeded along normal lines, this culture having diminished in importance during the past few years, due also to the fact that cassia products are in limited demand. The growers have found it unprofitable and have, therefore, wherever possible, replaced the cassia, as well as other cultures, with plantations that bring in something on the investment. More and more the Grasse region is becoming a center for Americans and English, or South Americans, who live there all the year round, with an occasional trip to Paris. Weather conditions there are ideal for more than three fourths of the year, this condition having served to cut down the revenue of the Northern seashore resorts, which have suffered extremely from unfavorable weather during the past several seasons. With this influx into the Riviera region of foreigners with money has come a decrease in many types of cultures, due to the villas that have been erected throughout the Côte d'Azur section during the past several years.

The roman cassia is a small crop in the winter months, this season having produced practically none to speak of. Distilling perfumers have comparatively little demand for roman cassia products, and for this reason the present crop is finding few buyers.

Prices paid for ancient and roman cassia this year to the growers are 9 francs (36 cents) and 5 francs (20 cents) per kilogram for ancient and roman respectively. Again, these prices do not cover the cost of gathering in a good many instances, thus bringing discouragement along to the growers, who more than ever feel the necessity of finding cultures other than the perfume-flower plants which have been so widely cultivated in the Grasse region for generations.

This matter of switching to other kinds of cultures appeared easy at first, before the crisis and depression had made themselves felt in the Southern part of France. Many of the growers of perfume-flower plants redoubled their efforts in the direction of the cut flower trade, including the raising of bulbs, etc., but this effort has been practically in vain, for the reason that a big market like England has practically closed its doors to importations from Southern France. This also applies to the primeurs, or out of season vegetables and fruits, from the South of France. Everyone is hard hit, without exception. The olive situation has not been favorable either, due to the increase in use of other types of oils, and so the situation remains one that is anything but favorable for the people living in the Southern part of France. A quiet sort of wealth used to be the rule here, but much of this has changed. Now that the weather conditions for the tourist seem to be highly favorable on the Côte d'Azur a good many of the people are turning to the development of this side of the business, trying to get as many foreigners with money into the region, thus increasing the outlets for vegetables, etc., grown in the region.

Jasmine continues to hold an important place in the minds of growers throughout the Grasse region, and this year's crop is being looked forward to with no little amount of anxiety. Just what will happen is hard to say, as it is pretty difficult for growers to tear up all their jasmine, because they have so much investment in it. Then again some are holding on to their plantations with the hope that others will do the tearing out, and that they can then come in on the up grade. This is simply passing the buck to the fellow who is confused with the present situation. Destruction of plantations continues, and there is now no doubt but that this season's yield will be below that of the 1931 crop. Jasmine products continue to weigh heavily on the market, with comparatively little movement into production. It is hoped that the first months of 1932 will see at least some movement into production, as the present situation is causing those concerned to see the entire slow-up in more than a pessimistic light. To many the whole situation has become hopeless from every point of view, because it has gone so far as to exhaust the capital of the people who have been touched.

The nominal price asked for jasmine concrete is 3,000 francs per kilogram ($120), which price is considered to be stable until the next crop, due to the large amount of holdover stocks. Of course, any important movement into production would produce the opposite reaction, although this is hardly likely for the next several months to come, at least.

Victoria violet stocks are comparatively low, with the nominal price of 8,000 francs ($320) per kilogram being asked. Violet gathering is not far off, and the present indications are an excellent yield. This will mean, of course, a drop in violet products, unless production demands among manufacturing perfumers increase substantially.

Parma violet concrete is practically non-existent, except the small stocks held by certain distilling perfumers. The Parma violet is gradually disappearing from the Grasse region insofar as the distilling perfumer is concerned, almost all of the Parma violets gathered going into the cut flower and crystallized flower trades.

Lavender prices are holding their own, with very little change during the past month or so. Every effort is being made to move stocks that weigh heavily, but nothing of great importance has been accomplished up to the present time. Nominal prices for the new yield, 1931, range between 175 to 190 francs per kilogram.

Spike lavender has experienced a rise in price in France, due to the failure of the Spanish crop to produce the usual amount. Spike lavender oil is bringing anywhere from 60 to 75 francs per kilogram on the French market, depending upon conditions involved. Apparently, the demand in France is fairly active at the present moment.

Specializing in
PERFUMERS'
RAW
MATERIALS

ESSENTIAL OILS
AROMATIC CHEMICALS
TRUE FLORAL OILS
RESIN FIXATIVES

Sole U. S. Agents for

BERTRAND FRERES
Grasse, France
Floral and French Essential Oils

PAOLO VILARDI
Reggio Calabria, Italy
Oils Lemon, Orange, Bergamot

VANILLIN FABRIK
Hamburg, Germany
Aromatic Chemicals

CONSTANTIN MINTCHEFF, KETCHEDJIEFF
Kazanlik, Bulgaria
Otto Rose

H. RAAB & CO.
Roermond, Holland
Artificial Musks

P. R. DREYER *Inc.*
12 EAST 12th STREET
NEW YORK, N. Y.

BILE SALTS
CHOLESTERIN
IRON PEPTONATE

THE WILSON LABORATORIES

4221 So. Western Ave., Chicago, Ill.

also

816 First Ave., New York
24 Oregon Ave., Philadelphia
869 Folsom St., San Francisco
1220 W. Pico St., Los Angeles
826 Clark Ave., St. Louis

CRYSALBA

THE NEW DENTIFRICE BASE

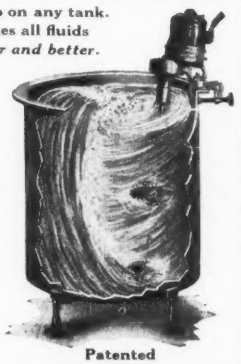
Send for generous sample and technical data on this new base developed by the world's largest dentifrice base producers.

THE ILIFF-BRUFF CHEMICAL COMPANY
DIVISION OF THE SWANN CORPORATION
Birmingham New York
St. Louis Cincinnati

LIGHTNIN PORTABLE MIXERS

Clamp on any tank. Mixes all fluids *faster and better.*

All sizes



They cost nothing if given credit for time and money saved over a short period.
Write for catalog and start 1932 the LIGHTNIN Way.

MIXING EQUIPMENT CO.
1060 Garson Ave., Rochester, N. Y.
New York, N. Y. Chicago, Ill. Patented

Vallauris, one of the largest orange flower producing regions in the South of France, is complaining through the syndicate of growers that the products of the region are suffering very much through various importations that arrive from North Africa and other countries. The syndicate recently called attention to the fact that much of the orange flower water sold on the market never saw an orange flower, the synthetics coming in for their share of this adulteration or fraud. The Vallauris syndicate is asking that the various products coming in from Morocco, Tunis, Algeria, etc., bear the mark of these countries, so that the Vallauris section can feel itself protected. The cooperative of the region is reporting practically disastrous amounts of stocks on hand of orange flower water, neroli and petit-grain. These products are simply not moving into production, despite their recognized value to the art of the manufacturing perfumer and other industries, like that of the baking trade for orange flower.

It is pointed out by the Vallauris syndicate that the orange flower products of that region have received world-wide recognition, based on a reputation earned for honest goods, and that something must be done to offset the disastrous condition that is gradually creeping over the entire orange flower producing region, including Grassee, Vallauris, le Cannet, Mougins, Antibes, Biot, Gattiéres, Le Bar, Saint-Jeannet, La Gaude, St.-Laurent-du-Var, Cagnes-sur-Mer. The Vallauris syndicate further points out that the whole yield of this region does not satisfy the world's requirements, and still it is practically impossible to move even a fair share of the existing stocks of orange flower products into consumption. Much stress is put on the development of synthetics during the past few years, and, apparently, the region feels this development almost more than anything else.

Jonquil bulbs have been placed, and tuberose bulbs taken in before the cold weather set in.

The mimosa is blooming now, and shipments in large quantities are being made to the big cities, like Paris, these taking a large proportion of the output. Distilling perfumers' requirements are comparatively small, the larger amount being treated during the months of February and March, depending upon individual needs.

Olive oil growers are doing all they can to bring into use the *grignons* or residue for fertilizing and fuel purposes, in order to realize something at least on the olive crop, which from the point of oil has been a losing one during the past few years. Reports from persons using the residue for fertilizing ground have been favorable, and the next few months will, no doubt, see a more active sale of the residue than before. This residue is now used quite extensively throughout the Grasse region for fuel, as it gives a good hot and steady fire for trades like the baking industry, requiring a sustained oven temperature.

Recently the matter of crisis in the Grasse region has brought into print a number of articles that show how far apart the growers and distilling perfumers still are, especially on certain points. The growers maintain that the synthetics have come in to ruin their business, whereas the distilling perfumers of Grasse hold that the synthetics have simply served to augment the use of perfumes throughout the world. In other words, these latter say that the synthetics have aided the natural flower oil business rather than hurt it.

According to the distilling perfumers of Grasse, the whole malaise of the region can be laid to only one thing: world depression. For some inexplicable reason everyone has stopped buying, that is all, this making it impossible to move essential oil stocks into consumption. With a lifting of the depression, a sudden change for the better would be experienced, say the distilling perfumers, a statement the growers are not ready to accept.

Citronella Down Slightly

Citronella oil is offered quite freely in the spot market at prices slightly below prevailing quotations a month ago. Ceylon in drums in quoted at from 33c to 35c per pound and Java at from 50c to 52c per pound. Purchases are characteristic of general buying in the oil market in that they are made up of small quantities for immediate or nearby delivery.

In a report on the outlook for Java oil Chemist and Druggist state that the present price is reasonable and there would be no reason to anticipate any appreciable change in prices were it not for the position of other Java produce. Very low levels are ruling for such things as tea, rubber, coffee and spices, so there is a risk that planters may have turned their attention to the only article that pays, namely, citronella oil. As already pointed out, quick returns can be obtained from new plantations, and therefore the possibility of increased supplies in the spring must be considered.

The position is still further complicated by the exchange. The rise of £50 to £60 a ton which occurred at the end of September was due entirely to a drop in sterling and should Holland or the Dutch East Indies decide to leave the gold standard prices would naturally react. To sum up, therefore, there seems to be no particular reason for consumers to make purchases for distant delivery. If they continue their present practice of simply covering their requirements for a month or so ahead they will be unlikely to regret it.

Shipments of citronella oil from Ceylon amounted to 340,600 pounds valued at $84,828 during the third quarter of 1931 as compared with 365,000 pounds, worth $135,000 for the same period last year, while declared exports to the United States totaled 126,200 pounds valued at $35,600 and 105,000 worth $43,400 respectively.

Eucalyptus Prices Cut

The quite dull market that has prevailed in eucalyptus oil has brought out lower quotations for this commodity. Drum lots are quoted at from 26c to 27c per pound with a strictly jobbing sale current at these figures. It is expected, however, that as the lower prices are favorable to the consuming trade a more active buying movement will be the result.

The Australian eucalyptus oil industry is languishing for lack of markets in other countries for the surplus production of oil. The distillation of eucalyptus oil was once a thriving industry, employing many men in the Bendigo forests, Victoria. One of the largest producers of oil in the Bendigo district is the State works in the Wellsford forest. Last season production is reported to have reached about 40 tons of oil, which was distilled from surplus forest growth obtained in the process of clearing the forests.

On September 10, Mr. Dunstan, M.L.A., referred to the matter in the Legislative Assembly, and urged the Minister of Agriculture to have inquiries made with the view of opening up markets for the sale of Victorian eucalyptus oil, suggesting that these might be found in the East, where a fair quantity might be sold at a profitable price. There was a large number of men engaged in the industry, and if the manufacture had to be abandoned they might become unemployed, and be forced to depend upon the Government for sustenance. The matter was supported by Mr. Frost, but nothing further was done.

Subsequently a meeting was arranged by an unemployment relief committee at which the distillers and cutters should confer with the Minister of Agriculture, the member for the district and the chairman of the Forests Commission. The chairman of the Forests Commission, in defence of the State-owned distilleries, explained that they were maintained for experimental purposes, to improve distillation processes, and to acquire information on the uses to which the oil could be put.

Geranium Prices Sag

With stocks of geranium oil reported fairly large, and only a small inquirey reaching the spot market, prices have again sagged to lower levels. Bourbon oil is now quite freely offered at from $3.50 to $3.90 per pound as to quality with Algerian oil selling at from $3.75 to $4.65 as to quality. The Turkish oil, however, remains unchanged at from $2.10 to $2.25 per pound with business on a hand to mouth basis.

MYSORE GOVERNMENT
Sandalwood
~~ Oil ~~

Distilled from
Santalum Album

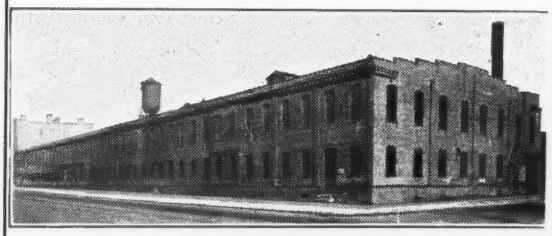
INSIST ON ORIGINAL CANS AND CASES

Agents for the United States and Canada

W. J. BUSH & CO.
(Incorporated)
Essential Oils
New York

Chicago National City, Calif. Montreal

TESTED CRUDE BOTANICAL DRUGS



Weehawken Main Factory

We are exporters, importers and millers of foreign and American Crude Botanical Drugs.

Our stocks of whole or ground drugs—over 780—are the largest and most complete in this country.

Our control laboratory has a staff of skilled Pharmacognosists, Biologists, Analytical Chemists and Microscopists.

Connections in all foreign countries and sales offices in principal cities.

S. B. PENICK & COMPANY
115-117 Fulton Street New York, N. Y.

Caffeine. U. S. P.
Acetanilide. U. S. P.

We are makers of a ***Superior Product*** and solicit your inquiries for spot or contract deliveries.

CITRO CHEMICAL COMPANY
MAYWOOD, N. J.

GERANIOL
for Soap

In various grades to meet every requirement as to price.

A. M. TODD COMPANY
KALAMAZOO MICHIGAN

Business Established in 1869

CERTIFIED
VEGETABLE
& COSMETIC
COLORS

INTERSTATE COLOR CO., INC.
Manufacturer
41 Park Row Suite 817 New York City

Thorough Sales Representation for Metropolitan District and Export

Available for Manufacturers of
Pharmaceuticals *Proprietaries*
Toilet Preparations *Drug Sundries*
Hospital and Surgical Supplies

Phone or Write
J. VAN VELSOR SMITH
WHitehall 4-0998
35 Water Street New York

Psyllium Seed Easier

The movement of French psyllium seed has been somewhat affected by the fact that the pressing requirements of many buyers have been, for the time being, well taken care of. The market is, therefore, somewhat easier in undertone at from 22c to 27c per pound as to quality. It is reported that offers of ten bag lots or more are being made on the basis of 19c a pound, as imported. The Indian or blond seed, on the other hand, is said to be meeting with considerable favor with a good volume of business going forward on the basis of from 8c to 10c per pound. The popularity of this grade of seed is attributed to a large extent to the more favorable price to consumers.

Consul General John A. Gamon, Marseille, reports that plantago psyllium seed production in France in 1931 was recently estimated at 4,410,000 pounds. It is said that yields would have been greater but for dry weather. The yield was from 1,070 to 1,285 pounds per acre. Over 90 per cent. was obtained through the usual threshing machine method. Cultivation was extended for the first time into the departments of Gard and Drome. Considerable extension of cultivation for the 1931-32 season is anticipated by French dealers. A number of producers belong to an association formed to stabilize prices and advance money to members. Independent growers are at times financed by merchants who furnish seeds gratis and buy in advance of half the crop at a stipulated price leaving the grower free to dispose of the remainder.

The plantago psyllium seed crop cultivated for the first time in Greece was harvested in August, the yield being approximately 25,000 pounds. The entire quantity was resown in Argos and Kastri (Peloponnesus) to increase the cultivated area for the 1932 crop. Some psyllium was recently found growing wild on a plateau in Central Peloponnesus.

Senega Root at Low Point

Senega root, on the basis of from 33c to 35c per pound is reported to be on a price basis lower than has been reached in many years. Demand throughout the past year has been considerably below normal and this condition continues into the new year.

The quantity of senega root imported into Japan from the United States increased from 29,200 pounds in 1929, to 38,600 pounds in 1930, although the total values were reduced, shipments aggregating $31,500 and $27,000, respectively. Japan's imports of this commodity from Canada declined from 14,300 pounds worth $16,400, to 5,800 pounds valued at $5,500 during the above period. It is reported that the use of substitutes in Japan has lessened demand with consequent price reductions.

Tragacanth Down Sharply

Gum tragacanth prices have declined rather sharply during the past month. Number 1 is now offered at from $1.10 to $1.15 per pound as to quantity; number 2 is at 95c to $1.05 per pound; number 3, 75c to 85c and powdered 70c to 80c per pound. The demand for tragacanth has continued along routine lines and due to this condition and the prevalence of ample stocks the undertone of the market continues easy after the decline. No changes are noticed in the various grades of Turkish gum.

Chamomiles Remain Firm

Hungarian chamomiles continue the firm undertone that has characterized the market in this commodity for the past several months. In the absence of large surplus stocks and the firm position the commodity continues to display in the primary market, some factors are of the opinion that with the resumption of a normal buying movement by consumers the article will take on a much firmer aspect. Spot quotations continue on the basis of from 14c to 16c per pound and from inquiries made in certain quarters it would appear that some dealers are without a supply. Roman's continue to be offered in a limited way at about 35c per pound.

Malva Supply Exhausted

Reports from abroad on blue malva flowers would indicate that the supply of this commodity is exhausted and there will be no more available until another crop is gathered many months hence. There are practically no stocks available on the spot market and it is therefore doubtful whether the holders of the comparatively few pounds still available would be willing to let them go at the scheduled price of 85c per pound. The above quotation is a nominal one as no recent transaction has been reported to make the market. Black flowers remain quiet and unchanged at from 25c to 40c per pound as to quantity and quality.

Stramonium Off Slightly

Slightly lower prices are quoted for stramonium leaves. Freer offerings and a prolonged period of inactivity has tended to unsettle this market to the extent that spot goods are in ample supply at from 9c to 10c per pound.

Marjoram Demand Small

A hand to mouth demand for marjoram has caused a slight recession in the spot asking price for this commodity. The market is on the basis of from 13c to 13½c per pound for the French with the undertone easy. The German grade continues dull at from 14c to 14½c per pound.

Vanilla Beans Supply Large

The carryover of vanilla beans of all grades into 1932, it is reported, will supply ample quantities for the demands of the consuming trade. Total sales tonnage here was reported as having been satisfactory for the year just past although the return from business done did not come up to expectations and was characterized as not entirely satisfactory.

Planters of vanilla vines were also reported as being dissatisfied with prices obtained during the past year and this is expected to have the effect of curtailing the next crop production. What this production will be on Mexicans it is still too early to estimate but it is reported that beans are now ready for picking but that due to the unsatisfactory market many of these beans are being left on the vines to ripen. What effect this condition will have ultimately will be of vital interest to consumers of the commodity.

Bourbon beans are still in supply and are still offered at the low prices that have prevailed for some time.

Arabic Goes to 7c

The gum market is characterized by a decline in all grades of arabic. Amber sorts are generally quoted at from 7c to 7½c per pound but conditions are such as to make shading probable on any business of a sizable quantity. It is reported that ton lots or more would not bring more than 6c per pound. New crop goods are being quoted for shipment at very low figures, in fact the lowest at which this product has ever been known to sell, so that the tendency here has been to unload as much gum as possible. Based on present import costs, 7c per pound, which is the scheduled price in bag lots, would be a high figure.

White No. 1 gum is now quoted on spot at from 17c to 18c per pound, with seconds generally quoted at from 15c to 16c per pound. Powdered is offered at from 12c to 15c per pound.

Carnauba Wax at 27c

Carnauba wax is easier in the spot market at from 27c to 29c per pound as to quantity for the number 1 grade. It is reported that the arrival of substantial quantities of wax had the tendency to reduce the market to the extent of about 2c per pound.

Golden Seal Weakens

A primary market more favorable to buyers of whole golden seal root had the effect of considerably softening the spot market. Prices here were down to the basis of from 70c to 75c per pound. The market for powdered goldenseal was so inactive as to put quotations on a nominal basis of $1.20 per pound.

Abbott
LABORATORIES

LOCAL ANESTHETICS
Procaine Hydrochloride U. S. P
Procaine Base
Benzocaine U. S. P. (Anesthesin)
ANALGESICS
Cinchophen U. S. P.
Neocinchophen N. N. R.
ANTISEPTICS
Acriflavine Hydrochloride N. N. R.
Acriflavine Neutral N. N. R.
Chloramine U. S. P.
HYPNOTICS
Phenobarbital U. S. P.
Phenobarbital Sodium N. N. R.
Barbital U. S. P.
Barbital Sodium U. S. P.

Send for quotation to

CHEMICAL
SALES DEPARTMENT
ABBOTT LABORATORIES
NORTH CHICAGO, ILLINOIS

"Standard of Quality Always"

PLYMOUTH
MEDICINAL WHITE OILS
Russian *Domestic*

COLD CREAM OILS
and
ALL RAW MATERIAL FOR TOILET CREAMS

STEARATES
ZINC ALUMINUM MAGNESIUM
Made Right *Priced Right*

M. W. PARSONS IMPORTS
AND
Plymouth Organic Laboratories
55 ANN STREET, NEW YORK

GLYCERINE
All Grades

COLGATE-PALMOLIVE-PEET CO.
Palmolive Bldg. Chicago, Ill.
Produced at and shipped from
NEW YORK LOUISVILLE
KANSAS CITY SAN FRANCISCO

THE DRUGGISTS' NEWS
Official organ of all Hungarian Druggists' Corporations read by all Hungarian Druggists, Perfumers, and others in this trade.
Best Advertising Organ
for everyone interested in this trade. Will create connections, procure agencies and supply you with reports.
TRY! ADVERTISE!
Ask for copy! Ask for advertising offer!
Apply to
"DROGISTEN ZEITUNG"
Sziv utca 33,
Budapest VI HUNGARY

Silver Label Gold Label
GELATINE
Pure Food and Technical
COIGNET GELATINES
17 State Street, New York City

NOTICE

Every subscriber has by this time received his copy of Drug Markets 1931 Catalog and Directory. If, for any reason, you have not received your copy, write to us and we shall be glad to remedy the oversight.

Saffron Lower

Spanish Saffron has been offered in the spot market at from $13.50 to $14.00 per pound. Release of recent arrivals broke the spot shortage that brought the price a month ago up to $20 per pound. This commodity has fluctuated so widely during the past several months that it is difficult to tell just what the spot market is at any given time. The market seems to be drastically affected by the amount of material released by the Department of Agriculture. On December 16 2 cases were detained by the department because of excessive moisture and 1 case because of excessive yellow styles. On January 6, 3 cases were held due to excessive moisture.

The production of red saffron in the Province of Greek Macedonia in 1931 amounted to 550 to 600 pounds, and 300 to 350 pounds of yellow saffron, as compared with 450 to 500 pounds of red saffron, and 250 to 300 pounds of yellow saffron in 1930. Improved methods of collecting and storing of pistils, the care with which insect pests were fought, and the prevailing dry weather, account for the superior quality of the 1931 yield over previous years in respect to color and perfume. The entire 1931 production is still in the hands of growers and Saloniki exporters are awaiting definite information as to the requirements of their foreign connections.

Arrowroot Advances

St. Vincents arrowroot has been increased 2c per pound in the spot market to the basis of from 10c to 11c per pound. Stocks here are reported to be in only a few strong hands. It is also reported that producers of arrowroot have combined in an amalgamation sufficiently strong to advance the asking price in the primary market.

Rhubarb Inactive

Rhubarb root is inactive and easier as sales have been confined to a few parcels with a resulting increase in competition. The decline in Chinese exchange has lowered replacement costs to importers. High dried is now rather freely offered at from 20c to 21c per pound with the powdered being generally quoted at from 25c to 27c per pound.

Gum Mastic Lower

The market for gum mastic is easy and lower at from 40c to 45c per pound. Consumers are reluctant to take on very large quantities with the result that only a few scattered inquiries are reaching the market. Under the circumstances, there are rumors current in certain quarters, that the above quotations could be shaded still further on a desirable order.

Pyrethrum Exports Down

Exports of pyrethrum flowers from Japan through Kobe during the third quarter of 1931 amounted to 880,000 pounds valued at $128,000, as compared with 1,114,000 pounds, valued at $166,000. Exports from Kobe during the first nine months of 1931 amounted to 3,064,000 pounds valued at $457,000. Previous estimates of the 1931 crop placed it at 3,300 long tons from Hokkaido and 4,000 tons from Honshu. However, it was announced by the Ministry of Agriculture in mid-September that the Hokkaido crop for the current year would not exceed 2,500 long tons, making a total for all Japan of 6,500 long tons as compared with 6,696 tons in 1930. (Consul Howard Donovan, Kobe.)

Experiments have been conducted in recent years on the island of Cyprus to determine the feasibility of pyrethrum cultivation. Samples of flowers grown were forwarded to London and subjected to the scrutiny of scientists and merchants for ascertainment of pyrethrin content and relative quality with Dalmatian flowers. Opinions denote the possibility of developing the industry in Cyprus. Data on any current developments when available will be reported.

Ephedra Movement Heavier

Tientsin markets have recently received increasing attention for supplies of Ephedra vulgaris. Largest quantities are secured from Shensi and Shansi Provinces. The herb also grows wild in Tibet and Mongolia whence it is transported to Tientsin on camels or on carts. The product is exported in hydraulic pressed bales of 400 to 450 pounds, wrapped in burlap. It is estimated that from 300 to 500 tons are available at Tientsin each year. Imports of Ephedra vulgaris into the United States, classified separately in import statistics for the first time, amounted to approximately 450,000 pounds valued at $21,000 during the first nine months of 1931.

Kamala Up 5c Pound

Kamala is firmer in the spot market with an increase of 5c per pound noted during the past month. Spot quotations are now on the basis of from 50c to 55c per pound. The carryover into 1931 was very heavy so that with the sharp decrease in demand experienced during the past year the market became very weak. Liquidation of these stocks, which it is reported cost importers as high as 90c per pound, has now practically run its course so that selling pressure is now not so great by those who did not wish to further carry this high priced material. Demand at the present time is moderately active.

Ergot Firmer

Ergot is in a very firm position owing to the fact that quotations for replacement have been higher. Russian on spot is offered at about 45c to 47c per pound with the Spanish selling up to 56c per pound. Both grades are reported in good demand for this period of the year.

Imports of ergot from Soviet Russia during October amounted to 13,054 pounds valued at $3,916.

For Plant Managers

(*Continued from page 45*)

then everything about a plant was a closely guarded secret.

"It is my own opinion that without an interchange of ideas there can be no continued progressiveness. True, there may be a certain amount of elementary progress made, but a constant development towards improvement in the process and methods of our own industries can only be achieved by open minded constructive interchange of thought and ideas.

"Such an association would, I believe, very soon pay for the cost and effort required to organize it, in dividends of a realizable worth.

"Production Men would obtain first hand and not oft garbled accounts of new methods and new machinery.

"A central clearing house for passing on eligible equipment to the industry, would cause a tremendous saving in production men's time.

"No one man can physically hope to see and talk to all the Sales Representatives who call during business hours. This is manifestly unfair to Manufacturers who send these men out but it would at the same time be ruinous to our own business, should we spend all of our time interviewing these men who come in all hours of the day. Some with things of interest to us but most often of the other type."

New Liner

Standard Textile Products Co., Clifton, N. J., has developed a new liner material known as, "Meritas." This is a highly polished, impervious paper, developed for withstanding the action of alkaline solutions. It may be obtained in colors. Samples will be sent on request.

Elgin in New York

Elgin Manufacturing Co., Elgin, Ill., filling machines, cappers, etc., announces the appointment of W. John Buedingen as exclusive representative in the New York territory with offices at 122 E. 42 st., that city. He has had many years of experience in the food and pharmaceutical machinery and equipment lines.

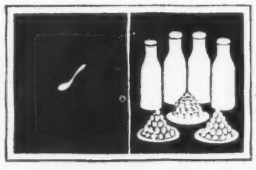
The superiority of Cod Liver Oil

Leading authorities have recently proved by the most thorough researches that a certain number of D vitamins in the form of Cod Liver Oil are far more effective in the treatment of rickets than the same or even double the quantity of these units in the form of irradiated Ergosterol.

This shows that the position occupied by Cod Liver Oil in therapy remains impregnable, and it seems unlikely that any artificial product will ever succeed in fully replacing nature's own medicine, which has been used for centuries on account of its unique curative properties.

The world famed Norwegian Cod Liver Oil, being under direct supervision of the Norwegian State, always maintains its high quality.

A TEASPOONFUL OF NORWEGIAN COD LIVER OIL CONTAINS MORE VITAMINS THAN



ALL THE BUTTER AND MILK ANY INDIVIDUAL CAN EAT AND DRINK IN A DAY

See that this seal is on every barrel.

Norwegian Cod Liver Oil

National Committee for Promoting the Consumption of Norwegian Cod Liver Oil.
Post Box 226, Bergen, Norway. Fabritius, Oslo.

COD LIVER OIL

A-A BRAND

Finest Medicinal Quality

The recognized standard, known for its high vitamin contents. Guaranteed the finest Norwegian non-freezing medicinal cod liver oil.

POULTRY GRADES

For animal and poultry feeding
Highest vitamin potency
Packed in barrels or drums

Write us for quotations

For Spot Delivery or direct shipment from Norway

BRÖDR. AARSAETHER A/S
AALESUND, NORWAY

P. R. DREYER Inc.

Sole Representative in the United States

12 EAST 12th STREET
NEW YORK, N. Y.

CHICAGO PHILADELPHIA KANSAS CITY
BALTIMORE ST. LOUIS CINCINNATI
LOS ANGELES SAN FRANCISCO DETROIT

Value

When You Go To
PHILADELPHIA at
HOTEL PENNSYLVANIA

A Room and a Bath For Two and a Half

WE HAVE THEM

$2.50 *Single with Bath*
$4.00 *Double with Bath*

39TH & CHESTNUT ST PHILADELPHIA

Tablet Making

(*Continued from page 43*)

obviate the influence of weather some of the very large manufacturers have installed air-conditioning apparatus.

In the coating of tablets too much liquid cannot be added but just sufficient to make the tablets "tacky." When the tablets are in this state precipitated chalk, powdered sugar or other powder is sifted on and this is rapidly taken up. Excess powder can conveniently be removed since this goes to the back of the pan. A number of sub-coats are applied to build up the tablet and round off the edges. When this tablet is nearly to size then the sugar solution is added either plain or colored. To make a good tablet requires great care and coat after coat properly applied. Chocolate coated tablets are colored often nowadays by using burnt umber in place of chocolate and this is mixed with a heavy sugar syrup.

Tablet must be thoroughly dried and properly "finished off" before being polished. They also must be thoroughly dried between each sub-coat or else the moisture will come out through the tablet and make a blotchy job.

In general the coating pan should revolve slowly, the operator from time to time pouring on the proper amount of sugar solution. The attrition of the sliding tablets builds up a uniform coating which is continuously dried out by means of a blast of warm air coming from a separate blower. If cocoa is used in the coating it should be added to the sugar solution in a finely pulverized form and thoroughly mixed. It should contain only a very small amount of cocoa butter, as this will separate out on standing or upon exposure to warm temperatures, and will cause the tablets to look dull and gray or spotty. When the tablets are colored, extreme care should be taken in the application of the coloring matter as the tablets are likely to come out very streaky. This condition can be avoided if the color is sprayed on with a spraying can or atomizer.

The coated tablets are then put into a polishing pan which may be a copper, apple shaped pan, coated on the inside with a mixture of paraffin, beeswax, or a blend of beeswax and carnauba. Spermacetti is sometimes mixed with these waxes, the desideratum of a good lining being that it shall impart a brilliant polish without crumbling and without wearing off too quickly. Another form of polishing pan consists of a cylindrical frame with a canvas body which is coated with the above named waxes. As these pans can be obtained in several sizes the small manufacturer will have no difficulty in obtaining one suited to his needs. However, this polish can be imparted also by putting the tablets into a bag together with pieces of wax and shaking them. This procedure in addition to being laborious does not give the uniform luster that the tablets get from sliding about in a specially constructed pan.

In conclusion a word as to packing. If tablets are intended to disintegrate quickly they should be packed in that form of container which give maximum protection from moisture. This is particularly of effervescent tablets. If they are sensitive to the action of light they should be packed into an opaque container or a bottle wrapped in some of the modern light resisting papers. As previously stated, if the tablets are packed in bottles an attachment can be placed on the machine to fill them. Other containers: envelopes, paper strips, boxes, cans and the like will need separate filling and counting machines of which there are several varieties.

Drug Trade in Depression

(*Continued from page 30*)

the final six months, recession in sales, an outgrowth of highly unseasonal weather conditions, probably resulted in some restriction of net earnings. Full year earnings on the common, we estimate, were close to $5.50 a share, compared with $6.03 in 1930. Losses from foreign currency depreciation are not expected to be serious. We anticipate no early change in the current $4.00 annual dividend.

Lambert Company: "Reflecting a moderate sales recession, net earnings receded sbaout 5 per cent. during the first nine months of 1931. Share returns during this period amounted to $7.16, against $7.57 in the similar 1930 interval. We estimate that full year 1931 earnings approximated $8.25 a share, compared with $9.52 in the preceding year. Current dividend rate of $8.00 annually probably will be retained during the near term at least, because of an unusually strong cash position."

Lehn & Fink Products Company: "We estimate that the $1.85 a share earned in the first half of 1931 was increased to approximately $3.50 for the full twelve months. This showing would compare with $4.07 a share earned in 1930; per share earnings in 1929 amounted to $4.10, and in 1928 to $4.59. Dividends have been maintained at the current $3.00 annual rate since formation of the company in 1925."

McKesson & Robbins: "Common share earnings for the first half of 1931 amounted to $0.51, as compared with $0.62 in the like interval of the preceding year. It is believed that large reserves for doubtful accounts, set up during the initial six months, minimized yearly adjustments. Thus, despite a decline of some 10 per cent. in full year sales, we estimate that 1931 earnings approximated $0.85 a share, against the $0.96 a share recorded in 1930, and $2.65 in 1925."

Parke, Davis & Company: "The nature of the company's business has resulted in stable earnings, and the trend of net income was gradually upward until 1930. The decline in 1930, moreover, was slight, as indicated by common share earnings of $1.58, compared with $1.76 in the preceding 12 months. A further moderate decline was witnessed in 1931, and we estimate that a profit of about $1.35 was realized."

Patents

UNITED STATES PATENTS

Deodorant Powder

This patent is concerned with a deodorant powder. Powder consists of dry powdered, emollient material as well as of solid aldehydic substance capable of giving off small quantities of formaldehyde at body temperature. It also contains solid ammonium salt capable of stabilizing formaldehyde. U. S. P. No. 1,813,004, filed March 3, 1927. Frederick C. Weber, Eastchester, N. Y.

Antiseptic Composition

New antiseptic composition to consist of water absorptive bentonite clay capable of forming jells. Also contains halogenated antiseptic substance. Henry W. Banks, Noroton, Conn. U. S. P. No. 1,813,109, filed December 15, 1925.

Treatment of Ether

Patent is concerned with process for treatment and packaging of ether so that product remains stable and protected over a long period of time. The ether is percolated through a cuprous compound. Walter C. Christiansen, Bloomfield and Raymond Van Winkle, Passaic, N. J., assignors, E. R. Squibb & Sons, New York. U. S. P. No. 1,813,664, filed February 15, 1930.

Making Liver Extract

Process is concerned with manufacture of liver extract for secondary anemia. There is accordingly produced from glands of the class which comprises the liver and the kidney a concentrated substance capable of producing beneficial effects in treatment of certain secondary anemias. Process consists in extracting glands with hot slightly acid water which has a pH of 5 to 6. Then extract is separated from residue and concentrated, and alcohol is added to produce concentration of 50 to 75%. Precipitate obtained by addition of alcohol is separated and preserved. George B. Walden, Southport, Ind., assignor, Eli Lilly & Co., Indianapolis. U. S. P. No. 1,813,788, filed October 10, 1930.

Normal Amyl Ethyl Barbituric Acid

New pharmaceutical products are made of normal amyl-ethyl barbituric acid type. Nitrogen atoms in molecule has connected to it either a hydrogen atom or an atom of a monovalent metal, or an ammonium ion or an inorganic base. This enables production of wide range of compounds. One such new substance is sodium normal-amyl ethyl barbituric acid. Horace A. Shonle, Indianapolis, assignor, Eli Lilly & Co., Indianapolis. U. S. P. No. 1,813,867, filed July 20, 1928.

Hair Treating Composition

Mixture of ammonium borate, which decomposes at elevated temperature, is brought into contact with hair. Mixture also contains material which will evolve carbon dioxide at lower temperature. Beneficial results are claimed to be obtained. Douglas R. Pinnock, Bayonne, N. J., assignor, E. Frederics Inc., New York. U. S. P. No. 1,827,801, filed August 24, 1928.

Aminoalkyl Derivatives of Aminotriphenylmethanes

Aminoalkyl derivatives of aminotriphenylmethanes form new synthetic pharmaceuticals of outstanding importance. The nitrogen atoms, of which there are two in these compounds, have connected to them a di-alkyl-amino-ethylene residue, an alkyl and di-alkyl-amino-ethylene, and an alkyl or an acyl group. A large variety of products is thus obtained. Werner Schulemann, Vohwinkel-Hammerstein, and August Eingler and Fritz Schoenhoefer, Elberfeld, Germany, assignors, Winthrop Chemical Co., New York. U. S. P. No. 1,828,077, filed August 24, 1925.

Sebacic Acid Dinitrile

Sebacic acid dinitrile is new product used in dispensing practice. Process of making consists in treating sebacic acid diamide with phosphorus oxychloride. Fritz Wilcke, Berlin-Adlershof, Germany, assignor, Schering-Kahlbaum, A. G., Germany. U. S. P. No. 1,828,267, filed October 11, 1928.

Closure for Containers

The receptacle, for example a toothpaste tube, is provided with an eccentric discharge aperture. A cap is rotatably mounted on receptacle. This cap has an eccentric aperture in top wall. Aperture is adapted in one position of cap to register with discharge aperture. There is a valve in discharge aperture. Arthur E. Smith, Los Angeles, Cal. U. S. P. No. 1,826,096, filed January 27, 1930.

Purifying Methyl Salicylate

First step in purifying methyl salicylate consists in adding methyl alcohol and cooling. Then methyl salicylate crystals are added to initiate production of further crystals. Crystals formed from mother liquor are then separated. Mark E. Putnam, Midland, Mich., assignor, The Dow Chemical Co., Midland, Mich. U. S. P. No. 1,814,853, filed January 13, 1930.

Preserving Ether

Ether is packaged in manner that preserves it over long period. The tinned interior surfaces of metal packages for ether are treated with an oxidizing gas so that surfaces are oxidized. Then ether is introduced into package. Edward Mallinckrodt Jr., St. Louis, and Henry V. Farr, Ferguson, Mo., assignors, Mallinckrodt Chemical Works, St. Louis. U. S. P. No. 1,814,718, filed November 17, 1927.

Alpha-Methyl-4-Hydroxybenzene Caprylate

Product possesses considerable advantages for use in manufacture of perfumes. It can be mixed to advantage with other odoriferous substances. Caprylate is colorless liquid, B. P. 170° to 172° C. at 6 mm.; and density 0.965 at 15° C. Martin Bollman, Berlin, Germany, assignor, Winthrop Chemical Co., New York. U. S. P. No. 1,813,607, filed March 19, 1929.

Captive Cap

Captive cap is for use on containers, such as toothpaste tubes. A single length of wire is mounted around neck of tube and supported thereon for movement solely in plane perpendicular to axis of neck. Wire pivotally supports cap and is adapted for locking engagement with it and has open ends whereby cap may be released. Albert Weidemann, Buffalo, N. Y. U. S. P. No. 1,811,904, filed February 20, 1929.

Iodine Products of Quinolin Derivatives

Patent is concerned with manufacture of iodine derivatives of quinolin compounds, such as quinolin carboxylic acids or esters. Iodine is loosely coupled with nitrogen of pyridine nucleus. Products are valuable as antiseptics, etc. Joseph Ebert, Westmont, N. J., assignor, Farastan Co., Philadelphia. U. S. P. No. 1,828,525, filed December 30, 1929.

Essential Oils from Lemons

Patent is concerned with process for recovery of essential oils from lemons and other citrus fruits. Fruits are first subjected to rasping or grating action to liberate oils. Then an alkaline solution is sprayed over these fruits to carry away oils. Alkaline solution containing oils is collected and oils are separated. Alexander Hutcheon Bennett, London, England. U. S. P. No. 1,814,888, filed August 9, 1930.

BRITISH PATENTS

Aminoalkoxy Antiseptics

Antiseptics are obtained by introducing halogens into aminoalkoxy derivatives of aromatic or quinoline series. Patent contains description of very large number of compounds of this type. Examples are the beta-diethylaminoethyl ethers of 2-chlorothymol, 2:4:6-tribromophenol, bromo-alpha-nathphthol, etc. Society of Chemical Industry in Basle, Basle, Switzerland. B. P. No. 351,605, filed April 4, 1930.

Purifying Lactic Acid

Patent is concerned with purification of lactic acid. Lactic acid obtained by fermentation, is freed from impurities such as butyric acid, caproic acid and other higher fatty acids by treatment with volatile solvents in which lactic acid is soluble. Solvents are carbon disulphide and chlorinated derivatives of methane and ethane, such as chloroform, ethylenedichloride and carbon tetrachloride. Solvent, after being shaken with lactic acid in cold, may be freed from dissolved impurities by adding neutralizing agent, such as lime and separating insoluble fatty acid salts formed. Lactic acid may also be purified by treatment with vapor of solvent in process analogous to steam distillation, acid being maintained just above boiling point of solvent used. J. A. Wuelfing and H. Umber, Berlin, Germany. B. P. No. 356,600, filed 1930.

Perfumes and Cosmetics

Monoaryl ethers of glycerine or glycol are mixed with aliphatic, aromatic or hydroaromatic carboxylic acids or sulphonic acids, or salts or substitution products thereof to form preparations soluble in water and utilizable as emulsification agents in preparation of perfumes or cosmetics. Suitable ethers are commercial mono-tolyl-glycerin or glycol ether, commercial, mono-xylenyl glycerin ether. Suitable added substances are soaps, fats, fatty oils, salicylic acid, sulphonated oils, naphthalene or other aromatic sulphonic acids, and their salts. Substances which may be emulsified include hydrocarbons, halogenated hydrocarbons, higher alcohols, phenols, fats, oils, terpenes, hydrogenated terpenes, essential oils, tar oils, pitch, asphalt but not cellulose ethers. Chemische Fabrik vormals Sandoz, Basle, Switzerland. B. P. No. 350,379.

Phenolphthalein Compositions

Process is concerned with production of finely divided phenolphthalein and preparation of laxative compositions. Phenolphthalein is dissolved in alkali and precipitated with acetic acid in presence of colloids, such as gum acacia. Latter is used in sufficient proportion to delay precipitation without gelling. A definite proportion of phenolphthalein by-products, for example 1-and 2-hydro-xyanthraquinones, fluoran and the like, is added. E. B. Putt, B. P. No. 352,934, filed April 4, 1930.

Bacteria for Mixed Autovaccine

Specific exciters of disease obtained either from faeces, tonsils, sputum or other center of disease, were grown on banana agar with or without blood or egg white. Cultures were made approximately in same ratio as they occur in normal diseased body and for time that varied with number of white corpuscles in patient. Germs from different sources may be mixed for form combined autovaccine. A. Becker. B. P. No. 357,553, filed March 20, 1930.

Bases for Toilet Preparations

Mineral oils are gelatinized to produce bases for manufacture of toilet preparations by addition of 6% to 9% of soap and heating to from 350° to 500° F. Oil may first be heated to 250° F. in order to remove water. Thinner product may be obtained by melting up solidified oil with more oil. In an example, one and one half pounds of soft soap made from castor, rapeseed or cottonseed oil is stirred into 20 pounds of axle oil preliminarily heated to 212° to 250° F. Temperature is then raised to 450° C. until frothing ceases. On cooling a stiff jelly results. M. Morgan, Calcutta, India. B. P. No. 351,041.

Synthesis of Vitamins

Vitamins A and D are synthesized in cholesterol, out of contact with oxygen, on exposure in a transparent (for example quartz) vessel to infra-red or ultra-violet light. Infra-red light favors production of vitamin A and ultra-violet light production of vitamin D. C. M. Richter. B. P. No. 356,793, filed June 6, 1930.

Hormone Preparations

Hormone preparations are characterized by being active when administered by mouth. Hormone, for example insulin, and a difficultly saponifible lipoid substance, particularly one of lipins produced in manufacture of female sexual hormones, for example placenta lipins, are dissolved in volatile solvent. Absorption agents, such as bile acids, polysaccharides and like, may be added or not, and solution evaporated. Schering-Kahlbaum A. G., Berlin, Germany. B. P. No. 357,555, filed April 10, 1930.

Morphine and Alkaloids from Opium

Crude material preliminarily freed from fats and the like is rendered alkaline by bases until pH is equal to 9. Dried mass is extracted with organic solvent, which is preferably mixture of an alcohol and halogenated hydrocarbon, for example methyl alcohol and chloroform. Morphine is precipitated from solution by water or acetone. Mother liquors yield other alkaloids on evaporation to dryness with sand and extraction with ether. A./S. Farmakon, Norway. B. P. No. 353, 069, filed April 17, 1930.

GERMAN PATENTS

Acyl Derivatives of K-Strophanthidin

Mixed aliphatic-aromatic acyles are introduced into k-strophanthidin. This is preferably accomplished in process which avoids use of high temperatures, and under certain conditions in presence of tertiary amines and indifferent diluents. Process may also be carried out at higher temperatures under certain conditions so that time of reaction is shortened and consumption of acylating agent is reduced. Schering-Kahlbaum A. G., Berlin, Germany. G. P. Nos. 510,430 and 512,336, filed March 9 and 16, 1929.

Recovery and Purification of Alkaloids

Raw materials containing alkaloids are extracted with dilute acids and disturbing impurities are precipitated. Concentration of hydrogen ions in solution is kept at certain optimum point so that conditions are most suitable for precipitation. However, operation is carried out so that alkaloids are kept in solution. In this manner all alkaloidal content of original raw material is obtained in pure state. Byk Guldenwerke Chemische Fabrik Aktiengesellschaft, Berlin, Germany. G. P. No. 510,185, filed May 21, 1926.

Acid Toothpaste With Colloidal Ingredients

Toothpaste contains as basic substance such colloidal materials, which have an absorbent action on tooth films. Particularly is colloidal pectin, that is beta-glutin, used in admixture with polishing agent consisting of inorganic colloids or of acid salts, such as potassium tartrate. Paste is prepared by adding dry powdered mass to hydroxides, such as aluminum hydroxide, titanium hydroxide, organic acids, for example tartaric acid and hygroscopic substances such as glycerin. Water is evaporated in process. Aktieselskabet Si Ko, Technisch-Chemische Fabrik, Oslo, Sweden. G. P. No. 503,626, filed April 7, 1926.

Thickener for Hair Dyes

Vegetable slimes are added to dye or bleaching solutions to increasing viscosity, but these substances are of such nature that when hair preparations are used, they do not cause hair to glue together, but dry out in crumbly and easily removable masses. Agar-agar and carragheen moss may be used. J. F. Schwarzlose Soehne G. m. b. H., Berlin, Germany. G. P. No. 503,627, filed October 1, 1927.

Basic Phenol Alkyl Ethers

Ethylene dihalogenides are allowed to act on such cyclic compounds, which are substituted in ortho-position to phenol-hydroxy group that is to be esterified, by an unsaturated residue, however not by normal acetylated aminophenols. Halogenated intermediate products obtained in this manner, are converted into monoalkylamines. Aqueous solutions of bases produced are particularly useful for injection purposes. I. G. Farbenindustrie A. G., Frankfurt-am-Main, Germany. G. P. No. 510,450, filed January 26, 1928.

Abstracts

Organo-Therapeutic Preparations

There are three principal groups of these preparations, namely, ordinary dried preparations obtained by simple dessication of the whole organ and intended for oral administration, dried preparations obtained by concentration of gland extracts, and substances, very highly purified, freed from albumen, peptone, etc. First portion of article describes principles of manufacture involved in each of these groups. Another portion describes various organo-therapeutic preparations made in Germany. Dr. K. Schulze, The Manufacturing Chemist, 1931, pages 321ff.

New Investigations on Hair Colors

Oxidation plays an important role in formation of hair pigment. Tests were made with dilute solutions of hydrogen peroxide. It was found that black hair always changes into blond shades, first passing through the chestnut brown stage, and red hair passes through the reddish blond stage before becoming blond, and then they both pass through the false blond stage finally to become white. Microscopically the hair does not differ from the original hair. The hair substance and structure remain unchanged. Conclusion was also reached that the natural hair color merely represents a stage of oxidation manifested in a pigment substance whose chemical nature is not accurately understood. Oxidation processes take place in the living hair. Chemical and microscopical examinations have revealed the fact that the same pigment probably exists in the hair in both the dissolved as well as the undissolved state. A chemical-physiological scale of hair colors can be set up. The difference between the pigments that color the hair of different races of people is due not only to the presence of different quantities of the same pigment but also to the presence of chemically different pigments. The author also discusses various other phenomena that are concerned with the color of the hair, a correct understanding of which should go a long way towards the establishment of the scientific and proper manufacture of hair dyes. Dr. W. Jankowsky, Forschungen und Fortschritte, volume 7, pages 342ff.

Chemistry of Antirachitic Vitamin

The actual active substance, vitamin D, which crystallizes in fine prisms, has a surprising stability and is no more sensitive to air than ergosterin. The substance, which has been isolated in the form of a citraconic acid addition product, has the same tendency to auto-oxidation which has been observed in the irradicated raw material. The vitamin is destroyed on long continued duration of the action of oxygen. The vitamin D is converted by heating at higher temperatures into inactive substance. The addition of one molecule of hydrogen converts it into dihydro-vitamin and further irradiation changes it into suprasterine I and II. These derivatives of the vitamin are all physiologically inactive. The vitamin has the same composition, the same molecular weight, an esterifiable hydroxyl group and three double bonds just like ergosterin. The irradiation must cause a shifting of the double bond or steric rearrangement of secondary alcohol group as well as a steric or structural rearrangement of the carbon atoms. The esters of ergosterin can be analogously converted into esters of the vitamin by irradiation. It is interesting that the slightest change in the ergosterin molecule, which has the shifting of the atoms, the introduction of double bonds or their saturation, results in an increase in the activity. Numerous isomers of vitamin have been prepared by the combination of such chemical reaction, the starting material being ergosterin. But none of these products possessed an antirachitic activity.

Author calls attention to poisonous properties of the vitamin in very large doses. The limiting toxic dose, that is the quantity which is sufficient to cause a marked injury to the organism, manifested in deposition of lime in the organs and in decrease of weight, amounts to 0.05 to 0.075 milligram per day per mouse. Dr. A. Luettringhaus. Chemiker Zeitung, 1931, pages 956 to 7.

Glyphenarsine

A complete study has been made of this substance which is also known as sodium glycinamide-phenylarsinate. Its properties are given, its chemical reactions and physical constants. Methods are described for determining the percentage of arsenic and nitrogen and the arsenic-nitrogen ratio. The results are said to be very satisfactory. The water of crystallization varies from 0.32 to 2.92%, and in compressed tablets from 3.87 to 5.6%. The product is very hygroscopic and easily absorbs 12.5 to 15.0% of water It is sold in ampoules and dessicator-flasks. It is known in the trade as Tryparsamide, tryponarsyl and novatoxyl. F. de Myttenaere. Journal de Pharmacie de Belgique, volume 30, pages 903-5.

Essential Oil Content of Drugs

Experiments were carried out to determine what effect pulverization has on the essential oil content of various drugs. It was found that often when the plant is treated in the ground state, distillation with steam gives less oil than when coarser fragments are employed. L. Koefler and F. Kramer. Archiv der Pharmacie U. Berichte d. Pharmazeutische Gesellschaft, 1931, number 6.

New Mercurials

A number of new mercurials have been prepared. The first is a derivative of isobutyl-allylmalonylurea, the structure of which has not been determined. Others are mercury-allyl isobutyl-allylbarbiturate, mercury-phenyl-3-propanol-2 isobutyl allylbarbiturate, mercury-heptanol-2 ethylbutylbarbiturate, mercury-phenyl-3-propanone chloride, mercury heptanol-2 glycollate and mercury propane-malonate lactone. The toxicity of these compounds is variable and often quite high. They act on the renal cell and cause an inhibition of its functions. The barbituric acid derivatives are not constant in their action on the nervous system. Thus the pharmacodyanmic properties of these mercurials are still not accurately determined. J. Levy, J. Keysen and J. Sferas, Bulletin des Societes Pharmacologiques. 1931, 573 to 589.

Microchemical Reactions of Barbituric Compounds

Authors made a study of reactions of various chemical solutions, such as acetic acid, solid ammonium phosphate, thallium acetate on solutions of the various barbiturials in 2% potassium hydroxide: also of a 5% solution of silver nitrate which has been treated with ammonia until precipitate has redissolved; also of Schwietzer's liquid (ammoniacal copper oxide solution) and finally of saturated bromine water and baryta water. Such well-known products as proponal, luminal, allonal, veronal, dial, rutanol, sandoptal, etc. were tested. Characteristics of the various precipitates formed as well as color of reaction are described and afford valuable means for detecting these products. L. van Itallie and A. J. Steenhauer. Pharm. Weekblad, volume 67, pages 977-85.

Care of Hair With Oils

Author describes necessity for use of oil in treatment of hair. He has found that use of oil alone can effect marvels in certain cases and in certain others it is necessary to use oil in admixture with other substances. The addition of about 2% salicylic acid is very effective. A preparation of this kind is described. Two grams of salicylic acid are dissolved in 10 grams of benzyl benzoate and then 88 grams of olive oil or peanut oil are added. The preparation may be perfumed to taste. Benzyl benzoate acts as an antiseptic. Methyl paraoxybenzoate can be used in another preparation in proportion of half a part by weight and fifty parts by weight of olive oil or peanut oil and preparation is perfumed at will. H. Schwarz. Der Parfuemeur, volume 5, page 814.

A New Vitamin Source

(*Continued from page 37*)

close to freezing. The halibut is dressed immediately after it is caught, and brought to shore packed in ice. Here the livers are examined and selected for the production of fresh halibut liver oil.

The freshly rendered halibut liver oil is bio-assayed for vitamins A and D, and serves as a basis for the finished medicinal product. The finished product now being offered by two prominent drug manufacturers is 60 times natural cod liver oil potency in vitamin A, and 250 times natural cod liver oil potency in vitamin D potency.

The original discovery that halibut liver oil appeared to have a far greater content of vitamin A than cod liver oil and any other fish liver oil was made by Schmidt-Nielson in 1929. At that time immediate steps were taken by Abbott Laboratories and Parke, Davis and Company to investigate the practical application of this discovery. Experimental supplies of fresh and healthy halibut livers were obtained by careful efforts and numerous experiments were undertaken to produce the fresh oil in the most suitable manner. After extensive series of bio-assays of halibut liver oil by a special process, it was discovered that its vitamin A potency far exceeds that reported in the literature, but also, that its natural vitamin D content, heretofore unknown, is unusually high.

This highly potent oil from the halibut livers is similar in physical and chemical characteristics to other known fish liver oils, but no other known natural vitamin A and D source can remotely approach it in nutritional value. The A and D potencies of cod liver oil are said to be small fractions compared to those of halibut oil.

The value of a product so high in vitamins A and D can readily be appreciated when it is realized that while cod liver oil was high in vitamin potency, it was relatively low in vitamin D potency. Then with the discovery of Viosterol—a product of almost limited potency of vitamin D—it became necessary to seek more potent sources of vitamin A. So by diluting halibut liver oil with a bland oil to give a uniform potency 60 times that of natural cod liver oil, and then, with Viosterol, stepping up the vitamin D potency of the product to 250 times the vitamin D content of natural cod liver oil, a product is obtained of which only a fraction of a dose, compared to cod liver oil, is required to furnish an equivalent amount of vitamins A and D, eliminating the difficulty of

(*Continued on page 89*)

New Bottle Device

A SIMPLE, but most effective as well as economical means of preventing the contents of a bottle from running down the side of the bottle has been developed by Ferdinand Gutmann & Company, manufacturers of bottle caps and closures. The principle of application of the device to the bottle is similar to that of the application of Filma-Seal, another Gutmann development.

The caps for the bottle to which the device is to be applied are shipped with the device in the caps. The device consists of a foil ring which is applied to the top of the bottle, completely covering the sealing surface of the bottle and overhanging this sealing surface slightly both inside and outside the bottle. The bottles on their travel from the automatic filling machine to the automatic capper pass under a simple machine which applies a suitable adhesive to the sealing surface of the bottle. Then when the capping machine applies the cap to the bottle, the ring enclosed in the cap is firmly pressed against the adhesive on the sealing surface. When the consumer takes off the cap, the foil ring adheres firmly to the sealing surface of the bottle.

When a liquid is poured from this bottle, it is said that none of the liquid runs down the outside of the bottle onto the threads. The liquid completely returns to the inside of the bottle. Thus the undesirable appearance of a bottle of cough medicine, milk of magnesia, etc. due to the contents of the bottle running down the outside of the bottle is completely removed.

The application of the device calls for large scale production since it is readily applied in the present course of automatic filling and capping equipment. The cost of both the additional operation and of the device itself is nominal.

BIRD'S-EYE VIEW OF PLANT AND RESEARCH LABORATORIES

QUININE SULPHATE

There is a tradition that the Indians of Peru were acquainted with the curative properties of Cinchona Bark, the story being that an Indian was cured of an ague after drinking water in which Cinchona trees had fallen, owing to an earthquake.

The Countess of Chinchon, who had been a famous beauty at the Court of Philip III, was seized with tertian fever while residing in Lima in the year 1638. The administration of Peruvian Bark cured the distinguished patient. The news of the cure was mainly responsible for the introduction of Peruvian Bark to Europe.

In 1820, Pelletier and Cavantou isolated Quinine from the Bark.

Today practically all of the Bark is obtained from cultivated trees grown in Java.

During the past 40 years, N. Y. Q. has produced many millions of ounces of Quinine Sulphate and the other salts of Quinine.

The purity of all our Quinine Salts is in strict accordance with U. S. P. requirements.

MANUFACTURERS OF

Acetanilid	*Codeine Sulphate*	*Glycerophosphates*	*Salicylates*
Bismuth Subnitrate	*Codeine Phosphate*	*Opium*	*Strychnine*
Bismuth Subcarbonate	*Cinchonidine*	*Potassium Iodide*	*Bromide of Soda*
Cinchonine	*Morphine Sulphate*	*Quinine Sulphate*	*Bromide of Potash*
Cinchona Alkaloids	*Ethyl Morphine*	*Quinidine*	*Bromide of Ammonia*
Cinchophen	*Iodoform*	*Thymol*	*Silver Salts*

Menthol-Y (*trade mark reg.*) *Vanillin*

In bulk for manufacturers and in packages for wholesale trade

THE NEW YORK QUININE & CHEMICAL WORKS INC.

GENERAL OFFICES

99-117 North Eleventh Street, New York, Borough of Brooklyn

NYQ ST. LOUIS DEPOT, 304 SOUTH 4TH ST., ST. LOUIS, MO. NYQ

Prices Current

Medicinal, Aromatic, and Photographic Chemicals, Crude Drugs, Spices, Essential Oils and Concentrates, Miscellaneous Raw Materials, etc.

Chemical prices quoted are of American manufacturers, spot New York, f. o. b. for immediate shipment, unless otherwise specified.

Products sold f. o. b. works are so specified. Imported chemicals are so designated. Resale stocks, when a market factor, are indicated "second hand."

Crude Drugs and Essential Oils are quoted f. o. b. New York (Manhattan with limitations) for immediate shipment

The range of price given is not "bid and asked," but are prices of different sellers, based on varying grades and/or quantities. Containers named are original packages most commonly sold.

Chemicals

Acetanilid
Hyoscyamine Alk.

Acetanilid, USP, 200 lb bbls..lb	.24	.25
Acetone, pure 350 lb drs wks..	.12	.14
Acetphenetidin, 225 lb bbls..lb.	1.25	1.30
ACID, Acetylsalicylic, 225 lb bbls.	.75	.80
Agaric, 1 oz vials.....oz	...	3.50
Arsenous, USP, 220 lb bbls lb.	...	.18
Benzoic, USP, 100 lb bbls.lb.	.60	.61
Boric, 300 lb bbls.....lb.	.09½	.10
Cacodylic, 5 lb. bot.....lb.	...	8.00
Camphoric, USP, VIII 1 lb bot.....lb.	4.82	4.82
Carbolic, USP, crys 112 lb tins.....lb.	.17	.18
Cinnamic, 5 lb cans.....lb.	3.25	3.50
Citric, USP, crys 230 lb bbl .....lb.	...	.33½
USP, crys imp. 112 lb keg .....lb.	.35	.37
USP, powd 200 lb bbl...lb.	...	.34
Gallic, USP, 150 lb bbls..lb.	...	.74
Glycerophosphoric, 25% 1 lb bot.....lb.	1.40	1.75
Hydriodic, USP, 10% 5 lb bot.....lb.	...	.70
Hydrobromic, USP, 40% 155 lb. cbys.....lb.	...	.55
Hypophosphorous, USP, 30% .....lb.		
5 gal demis.....lb.	...	.85
Lactic, USP, VIII 100 lb cbys lb.....	.53	.59
USP, X 100 lb cbys.....lb.	.57	.59
Phenylcinchonic.....lb.	...	3.25
Phosphoric, USP, Syr 70 lb drs.....lb.	.14	.15
Pyrogallic, crys 5 lb cans..lb.	1.30	1.40
Resublimed, 5 lb cans...lb.	1.60	1.70
Salicylic, USP, 100 lb bbls.lb.	.40	.45
Stearic, double pressed, bags .....lb.	.08½	.09½
Triple pressed, bags,....lb.	.10½	.12½
Succinic, 100 lb bbls.....lb.	...	1.35
Sulfurous, USP, 6% 100 lb cbys.....lb.	.05	.06
Tannic, USP, fluffy 50 lb bbls. .....lb.	.90	.93
Powd 200 lb bbls.....lb.	.80	.85
Tartaric, USP, 300 lb bbls.lb	.25½	.26½
Aconitine, Alk, crys 1 oz vials .....oz.	...	30.00
Amorphous, 1 oz vials....oz.	...	20.00
Adeps Lanae, hyd 350 lb bbls lb.	.13	.15
Anhydrous, 350 lb bbls....lb.	.14	.16
Agaricin, 1 oz vis incl.....oz.	...	2.32
ALCOHOL, Benzyl, 5 lb bot lb.	1.20	1.35
F. O. B. Works		
Ethyl, USP, 190 pf 50 gal bbls.....gal.	...	2.563
Grain U. S. P. bbls....gal.	...	2.613
Pure tax free drums...gal.		
Ethyl.....	...	.473
Grain.....	..	.523
Denatured, (drums included) add 5c for bbls.		
No. 1 spec.....gal.	.335	.415
No. 5 comp.....gal.	.345	.425
23 a, spec.....gal.	.37	.49
39 b, spec.....gal.	.395	.515
40 m, spec .....gal.	.34	.46
Isopropyl refd 98-99% drs. incl.....gal.	.55	.60
Phenylethyl, 1 lb bot.....lb.	4.30	4.50
Aloin, USP, 100 lb cases....lb.	1.41	1.44
Aluminum Acetotartrate kegs .....lb.	...	1.60
Amidipyrine, 10 lb boxes....lb.	4.00	4.10
AMMONIUM, Acetate 100 lb kegs.....lb.	.38	.40
Benzoate, USP, 1 lb bot...lb.	...	1.27
Borate, 10 lb bot.....lb.	...	.35
Bromide, USP, 450 lb bbls.lb.	.35	.36
Carb, USP, lump 100 lb kegs .....lb.	...	.13½
USP, powd 100 lb kegs..lb.	...	.14½
Citrate, 100 lb kegs.....lb.	.90	1.30
Ichthyolate, as to brand..lb.	4.00	4.50
Iodide, USP, 25 lb jars...lb.	...	5.20
Phosphate, dibasic 250 lb bbls .....lb.	.48	.50
Salicylate, USP, 100 lb kegs .....lb.	1.15	1.20
Valerate, USP, 25 lb jars...lb.	2.75	2.90
Amylene Hydrate, 1 lb bot..lb.	...	7.10
Antipyrine, USP, 100 lb cans.lb.	2.00	2.50
Apomorphine Hydrochloride, ½ oz. vials.....oz.	22.60	22.70
Arecoline Hydrobrom, 1 oz vials .....oz.	5.25	5.35
Aspidospermine Amorphous..oz.	...	15.00
Atropine Alk, USP, 1 oz. vials .....oz.	6.50	7.00
Methyl bromide, 1 oz vials.oz.	...	25.00
Sulfate, 5 oz cans.....oz.	...	2.50
Single ounce.....oz.	...	3.00
Barbital, 1 lb. bot.....lb.	4.00	4.35
Barium Iodide, 5 lb box.....lb.	...	5.15
Sulfate, X-ray diagn bbls..lb.	.09½	.10
BAY RUM Porto Rico, 45 gal. bbls.....gal.	.75	.80
Domestic syn. 50 gal bbl..gal.	.70	.75
St. Thomas, 50 gal bbls...gal.	.80	.90
Benzonaphthol, 5 lb boxes...lb.	2.50	2.60
Benzoyl Cholride, 500 lb dr..lb.	1.00	1.05
Benzyl Benzoate, Medicinal FFC.....lb.	1.20	1.40
Chloride Redis, 160 lb cby.lb.	.30	.35
Formate, 1 lb bot.....lb.	3.25	3.50
Succinate, 160 lb cby.....lb.	...	5.25
BISMUTH, metal 100 lb cases .....lb.	...	1.25
Ammon. Citrate, USP, 5 lb cans.....lb.	...	3.25
Betanaphtholate, 5 lb box.lb.	...	2.90
Citrate, USP, 5 lb cans....lb.	...	2.60
Chloride.....lb.	...	3.00
Hydroxide.....lb.	...	2.90
Nitrate, 25 lb jars.....lb	...	1.15
Oxide anhydrous.....lb.	...	3.25
Oxychloride, 25 lb boxes...lb.	...	2.80
Salicylate, 25 lb boxes....lb.	...	1.65
Subcarbonate, USP, 25 lb boxes.....lb.	1.55	1.60
Subcarbonate, X-ray diag 1 lb. bot.....lb.	2.50	2.57
Subgallate, USP, 25 lb boxes .....lb.	1.65	1.70
Subiodide, 5 lb lots.....lb.	...	4.10
Subnitrate, USP, 25 lb jar.lb.	1.35	1.40
Subsalicylate, USP, 25 lb boxes.....lb.	2.45	2.50
Tannate.....lb.	...	2.30
Borax, crys USP, 400 lb bbls.lb.	...	.06
Bromoform, USP, 5 lb bot cases .....lb.	1.65	1.90
Butylchloral Hydrate bot....lb.	4.00	5.00
Cadmium iodide, 10 lb bot...lb.	...	4.55
CAFFEINE Alk, USP, 1.....		
100 lb kegs.....lb.	2.45	2.50
Citrated, 50 lb cans.....lb	2.20	2.45
Hydrobromide, 1 lb bot...lb.	4.80	5.00
Hydrochloride, 1 lb bot...lb	6.05	6.55
Sulfate, 1 lb bot.....lb.	5.40	5.90
Sodium Benzoate, tins....lb.	...	3.05
Salicylate, tins.....lb.	...	2.95
Calcium Bromide, 100 lb cs..lb.	...	.00
Carb, USP, 175 lb bbls....lb.	.05	.06
Gluconate, Gran. 125 lb..... bbls.....lb	.30	.35
Powd.....lb.	.32	.37
Glycerophos, 250 lb bbls...lb.	...	1.05
Hypophos, USP, 25 lb cans lb.	.55	.60
Iodide, 5 lb bot.....lb.	...	4.85
Lactate, USP, 500 lb bbls lb.	.45	.50
Lactophosphate Soluble...lb.	...	1.20
Powdered tins.....lb	...	1.00
Insol, powd tins.....lb.	...	.50
Phosphate & Sulfate Tooth Paste grade, Works..lbs.	.03	.06
Sulfide, USP, 100 lb drs...lb.	.21½	.24
CAMPHOR, Jap. ref. slabs 100 lb. cases.....lb.	.49	.50
Refined powd.....lb.	.49	.50
½ oz tab, 100 lb cases....lb.	.62	.63
Liniment, bbls.....gal.	2.10	2.20
Monobrom, 100 lb cases...lb.	1.60	1.65
Casein edible, 100 lb kegs...lb.	.45	.55
Charcoal Animal medicinal jars incl.....lb.	...	.50
Charcoal Wood, powd, 100 lb. bbls.....lb.	.06	.07
Chloral Hydrate, USP, 25 lb jars.....lb.	.75	.77
100 lb drums.....lb.	.70	.75
Cholesterin.....lb.	10.25	11.00
Chloroform, USP, 50 lb drs...lb.	.25	.27
Chlorophyll, 1 lb. bot.....lb.	2.12	2.30
Chromium Sulfate Scales, tins .....lb.	.45	.50
Powdered tins.....lb.	.50	.55
Chrysarobin, 50 lb tins.....lb.	3.75	4.10
Cinchonine Alk, 100 oz tins.oz.	...	.34
Crystal.....oz.	.43	.46
Sulfate, 100 oz tins.....oz.	...	.23
Cinchonidin Sulfate, 100 oz tins .....oz.	.32	.35
Cincophen, U.S.P. kegs....lb.	...	2.75
Cocaine Alk, USP, 1 oz vial..oz.	...	11.07
Hydrochloride, USP.....oz.	...	8.50
CODEINE Alk, 1 oz vials, 10 lots.....oz.	...	10.52
Hydrobromide.....oz.	...	8.92
Hydrochloride.....oz.	...	9.52
Nitrate, oz vl 10 oz lots....oz.	...	9.80
Phosp. oz vl, 10 oz lots....oz.	...	7.92
Salicylate.....oz.	...	8.25
Sulfate, oz vl, 10 oz lots...oz.	...	8.42
Colchicino Alk, USP, 1 oz vl.oz.	...	20.00
Salicylate, 1 oz vls.....oz.	...	35.50
Cream Tartar, USP, 300 lb bbls .....lb.	.20½	.20½
Imp. powd. 224 lb bbls....lb.	.19½	.20½
Creosote, USP, 42 lb cbys....lb.	.45	.47
Carbonate, 150 lb.....lb.	1.50	1.60
Cresol, USP, 400 lb drums...lb.	...	.18
500 lb drums.....lb.	.12	.15
DIGITALIN Pure, 1 oz vial..oz	15.00	15.50
Dover's Powder, USP, 5 lb tin .....lb.	2.75	2.80
Duboisine Sulfate, 1 oz vl....oz.	35.00	40.00
Emetine Alk, 15 gr vial.....oz.	...	.85
Hydrochloride, USP, 1 oz vl .....oz.	25.00	26.00
15 grain vials.....oz.	2.50	2.70
Ephedrine, alk. 25 oz. tins,..oz.	2.90	3.45
Hydrochloride, 25 oz. tins, oz.	2.25	2.70
Sulfate, 25 oz. tins.....oz.	2.25	2.70
Epsom Salts, USP, 200 lb bbls .....100 lb.	2.25	2.50
Imp. 100 lb bbls.....100 lb.	2.30	2.35
Ergotin Bonjean, 1 lb jars...lb.	18.50	19.00
Eserine Alk, 1 oz vials.....oz	...	50.00
Salicylate, 1 oz vials.....oz.	...	40.00
Sulfate, USP, VIII 1 oz vials .....oz.	...	40.00
ETHER, USP, 55 lb drums..lb.	...	.11
Anaesthesia, 55 lb drums..lb.	.21	.23
Nitrous, 1 lb bot.....lb.	...	.80
Ethyl Chloride, 200 lb bot...lb.	.22	.24
Ethyl Iodide, 5 lb bot.....lb.	...	6.25
Formaldehyde, USP, 100 lb cbys lc-l wks.....lb.	.07	.07½
Gall Extract.....lb.	.20	.21
GLANDULAR SUBSTANCES		
Duodenal Substance, 1 lb lots	...	4.75
Liver Substance (Hepatic) 1 lb lots.....	...	4.25
Orchic Substance (Testicular)	...	3.75
Ovarian Substance, whole, 1 lb lots.....	...	16.50
Ovarian Residue, 1 lb lots....	...	12.00
Pituitary Substance, whole 1 lb lots.....	...	34.50
Pituitary Substance, Anterior Lobe, 1 lb lots.....	...	23.50
Thyroid, U. S. P., 1 lb lots...	...	3.75
Oxgall Powder, 1 lb lots....	...	1.25
GLYCERIN, CP, 550 lb drums .....lb.	...	.11½
Gold Chloride, bottles.....oz.	12.00	12.50
Guaiacol, liq. USP. 100 lb cbys.....lb	1.65	1.75
Crystals.....lb.	2.25	2.50
Benzoate, 1 lb bottles.....lb.	...	13.00
Carbonate, 5 lb boxes.....lb.	1.70	2.50
Halazone, 5 lb bot.....lb.	2.75	2.25
Hexamethylenetetramine, USP, 100 lb dr.....lb.	.46	.47
Homatropine Hydrobrom USP. .....oz.	...	14.50
5 oz and 1 oz vials.....oz.	...	13.50
Hydrastine Alk, USP, 1 oz vial .....oz.	20.50	21.00
Hydrochlide, USP, 1 oz vials .....oz.	20.50	21.00
Sulfate, 1 oz vial.....oz.		
Hydrastinine Hydrochloride, USP, 15 gr vials.....oz.	22.50	23.00
Hydrogen Peroxide, USP, soln 375 lb bbls.....lb.	...	40.00
Hyoscine Hydrobrom, USP, 1 oz vials.....oz.	.03½	.04½
5 oz, 1 oz vials.....oz.	35.00 13.07	35.00 13.57
Hyoscyamine Alk, crystals, 1 oz vials.....oz.	...	25.07
Amorphous, 1 oz vial...oz.	...	75.07

Chemicals

Hydrobromide, USP, 1 oz vial oz.	...	25.00
Sulfate, 1 oz vial oz.	...	25.07
Hypoquinone, 100 lb kegs lb.	...	1.10
ICHTHYOL, tins lb.	4.00	4.25
Iodide Arsenous, 5 lb bot lb.	...	5.20
Arsenous-Mercuric soln, 5 lb bot qt	...	.26
Iodine, crude, 200 lb kegs lb.	...	3.89
Resublimed, 10 lb tars lb.	4.65	4.70
Tincture demis gal.	...	4.20
Iodoform, powd 10 lb bot lb.	...	6.50
Iron & Ammonium Citrate, USP, 50 lb cans lb.	.65	.66
Chloride, USP, lump 400 lb bbls lb.	.06	.08
Citrate, USP, VIII 25 lb can lb.	.94	.99
Hypophosphite, 5 lb cans lb.	1.55	1.65
Iodide, 1 lb bottles lb.	...	4.28
Phosphate, USP, 50 lb cans lb.	...	.69
& Potas Oxalate, 250 lb bbl lb.	...	.45
Pyrophosphate, USP, 50 lb lb.	.74	.80
& Sod Oxalate, 50 lb cans lb.	...	.30½
Sulfate, USP, crys bbls lb.	.04	.04¼
Ferrous dried bbls lb.	...	.08
Valerate, tins lb.	2.75	3.00
Jalap Resin, USP lumps, 5 lb tins lb.	...	4.00
Powdered, tins lb.	...	4.65
Lead Acetate, USP, 100 lb kegs lb.	.16½	.19½
Iodide, USP, VIII 5 lb bot lb.	3.20	3.40
Lecithin, 5 oz jars oz.	1.00	1.30
Licorice Ext Mass, cases lb.	.19	.20
Compound powder, bbls lb.	.11	.13
LITHIUM CARBONATE, 250 lb bbls lb.	1.25	1.35
Citrate, USP, 100 lb kegs lb.	...	1.40
Iodide, 5 lb bottles lb.	...	5.65
Lobeline Sulfate, ¼ oz vial oz.	...	8.75
Magnesium Carbonate, USP, 100 lb bbls lb.	.08	.09
English, oz blocks oz.	.16	.18
Glycerophosphate, 5 lb tins lb	3.20	3.25
Hypophosphite, 5 lb cans lb	1.15	1.20
Salicylate, 100 lb kegs lb	...	1.10
Stearate, bbls lb.	.23	.25
Manganese Glycerophosphate, 5 lb tins lb.	2.90	3.00
Hypophosphite, USP, VIII 5 lb cans lb.	1.35	1.40
Iodide, 1 lb bottles lb.	6.40	6.65
MENTHOL, USP, 60 lb cases lb.	3.25	3.45
Synthetic, cases lb.	2.75	3.00
Mercury Metal, 75 lb flasks fl.	66.00	67.00
Bichloride, crys 25 lb box lb.	...	1.08
Gran powd, 100 lb kegs lb.	...	.93
Bisulfate, 25 lb boxes lb.	...	1.48
Blue Mass, 25 lb boxes lb.	...	.84
Powd, 25 lb boxes lb.	...	.85
Blue Ointment, USP, 50%, 25 lb cans lb.	...	.90
Mild 30%, 25 lb cans lb.	...	.89
33 1/3% mercury lb.	...	.94
Calomel, 50 lb boxes lb.	...	1.51
English lb.	2.65	2.75
Iodide, green, 25 lb jars lb.	...	4.53
Red, USP, 25 lb jars lb.	...	4.63
Yellow, USP, VIII, 25 lb jars lb.	...	4.53
Red precip Powd. USP, 25 lb boxes lb.	...	1.64
White precip, Powd., USP, 25 lb. boxes lb.	...	1.59
Salicylate, 25 lb bot lb.	...	2.32
With chalk, USP, 25 lb boxes lb.	...	.69
Methanol, Pure 1c-1 drs gal	...	.44
Methyl Salicylate, USP, 50 lb cans lb.	.40	.42
Methylene Blue, USP, med 5 lb cans lb	2.00	2.05
Milk powd, 150 lb bbls lb.	.09	.12
MORPHINE Alk, 5 oz tin oz.	10.90	10.95
Acetate, 5 oz tins oz.	8.75	8.80
Hydrobromide, 5 oz tins, 10 oz lots oz.	8.75	8.80
Hydrochloride, 5 oz tins, 10 oz lots oz.	8.75	8.80
Ethyl Hydrochloride, 5 oz tins 10 oz lots oz.	...	10.85
Sulfate, 5 oz tins, 10 oz lots oz.	7.85	8.00
Naphthalene Flake, 175 lb bbls wks lb.	.04½	.05
Balls, 250 lb bbls wks lb.	.05½	.06
Oxgall, Purified, 5 lb bot lb.	1.75	2.50
USP, 5 lb bot lb.	2.00	2.50
Oxyquinoline Sulfate, tins lb.	8.50	9.25
Pancreatin, USP, 100 lb lb.	...	1.90
Paraffin, refd, 200 lb cs slabs 118-120 deg MP lb.	.08	.09
128-132 deg MP lb.	.07½	.07¾
Para-Aldehyde, USP, 100 lb carboys lb.	.48	.50
Pepsin, USP, 100 lbs. 1:3000 lb.	...	2.25
100 lbs. 1:6000 lb.	...	4.00
100 lbs. 1:10000 lb.	...	6.50
Peptone, powd, 5 lb bot lb.	...	1.50
PHENOBARBITAL, U. S. P., 1 lb. bot lb.	8.50	9.00
Phenolphthalein, U. S. P. lb.	.80	.82
5 lb cans 100 lb lots lb.	.88	.93
Pilocarpine Hydrochloride, USP, 1 oz vials 25 oz lots oz.	...	3.25
Nitrate, 25 oz lots oz.	...	3.25
Single ounce oz.	...	3.50
Alkaloid, 15 gr vials vl.	...	.75
Piperadine, 25 oz bottles lb.	...	8.00
Popodhyllin 5 lb bottles lb.	4.35	4.50
Potassium Acetate, USP, 100 lb kegs lb.	.29	.30
Bicarb, USP, crys 320 lb bbls lb.	.09½	.10
Bromide, USP, crys 100 lb cs lb.	.31	.32
Citrate, USP, 50 lb bbl lb.	.42½	.43
Guaiacol Sulfonate lb.	1.95	2.25
Potassium Hypophosphite, 10 lb. cans lb.	.75	.80
Iodide, USP, 100 lb cases lb.	3.25	3.30
Lactophosphate, 4 oz bot lb.	...	.90
Permangan, USP, crys, 100 lb drs wks lb.	.15	.15½
Phosphate dibasic pure, kegs lb.	...	.49
Salicylate, 25 lb cans lb.	...	1.18
Sulfate, USP, VIII, 100 lb kegs lb.	.13	.15
Sulfocyanide, CP 15 lb jars lb.	...	.50
Tartrate, CP, tins lb.	...	.65
Pyrogallol, USP, see Acid Pyrogallic	...	...
Quinidine Alk, 100 oz tins oz.	.63	.68
Sulfate, 100 oz tins oz.	...	.45
QUININE SULFATE, USP, 100 oz tins oz.	...	.36
1 oz tins, 100 oz lots oz.	...	.46
Acetate oz.	...	.72
Arsenate oz.	...	.72
Benzoate oz.	...	.73
Bisulfate, USP oz.	...	.36
Citrate oz.	...	.46
Dihydrobromide oz.	...	.50
Dihydrochloride, USP oz.	...	.50
Ethyl Carbonate, 16 oz tins oz.	...	.54
Ferrocyanide oz.	...	.73
Formate oz.	...	.67
Glycerophosphate oz.	...	.86
Hydrobromide, USP oz.	...	.45
Hydrochlorosulfate oz.	...	.50
Hypophosphite oz.	...	.65
Lactate oz.	...	.66
Phenolsulfonate oz.	...	.78
Phosphate oz.	...	.55
Salicylate, USP oz.	...	.48
Tannate, USP oz.	...	.39
Tartrate oz.	...	.73
Valerate oz.	...	.78
Urea Hydrochloride, USP oz.	...	.52
Rennet, N. F. 5 lb 1:25,000 lb.	2.95	3.50
Resorcinol, USP, 25 lb cans lb.	1.57	1.65
Rochelle Salt, USP, 225 lb bbl lb.	.16	.16½
Rock Sugar, 5 lb boxes lb.	...	.15
Saccharin, USP, 10 lb cans lb.	1.70	1.80
USP, Soluble, 10 lb cans lb.	1.75	1.85
Salicin, USP lb.	...	12.50
SALOL, USP, 100 lb drums lb.	...	.90
Saltpetre, powd, bbls wks lb.	.06½	.08¼
Santonin, USP, bulk lb.	100.00	107.00
Saponin, refined lb.	1.30	1.50
Seidlitz Mixture, 250 lb bb lb.	.13	.13½
Silver Metal, American oz.	...	.29½
Iodide, 16 oz lots oz.	...	.69
Nitrate, 100 oz bottles oz.	.23½	.25¾
Nucleinate, bulk oz.	...	.37
Proteinate oz.	.39	.41
SODIUM BENZOATE, USP, 100 lb bbls lb.	.44	.48
Bromide, USP, 100 lb kegs lb.	.31	.32
Cacodylate, USP, 25 lb bot lb.	4.75	5.90
Citrate, USP, X 50 lb kegs lb.	.34½	.36
USP VIII, 50 lb kegs lb.	.28½	.30
Glycerophosphate, N F, crys 25 lb cans lb.	1.27	1.33
Powder, 25 lb tins lb.	1.32	1.38
Soln, USP, 25 lb tins lb.	1.05	1.15
Hypophosphite, USP, 25 lb cans lb.	.60	.65
Iodide, USP, 25 lb jars lb.	4.25	4.30
Phosphate (Mono-Sodium), 100 lb kegs lb.	.28	.29
Di-Sodium USP, granular, 275 lb bbls lb	.07½	.08
Pyrophosphate, 100 lb kegs lb.	...	.29
Salicylate, 100 lb kegs lb.	...	.47
Sulfocarbolate, USP, 100 lb kegs lb.	...	.25
Sulfocyanate, CP crys, jars included lb.	...	.60
Spartein Sulfate, USP, 25 oz bulk oz.	.65	.70
Single oz vial oz.	.77	.90
STRONTIUM BROMIDE USP, 50 lb kegs lb.	.46	.47
Carb, 100 lb kegs wks lb.	...	.20
Iodide, USP, 25 lb jars lb.	...	4.00
Lactate, kegs lb.	.90	1.10
Nitrate, 600 lb bbls NY lb.	.08	.08½
Imp. bbls NY lb.	.08	.08½
Salicylate, USP, 100 lb keg lb.	...	1.10
Strophanthin, USP, 1 oz vial oz.	19.00	19.00
Crystals lb.	75.00	75.00
Strychnine Alk, USP crys, 100 oz tins oz.	...	.55
Powdered oz.	...	.45
Acetate oz.	...	.65
Arsenate, 25 oz cans oz.	...	.65
Glycerophosphate, USP oz.	...	.65
Hydrobromide oz.	...	.65
Hydrochloride oz.	...	.65
Hypophosphite oz.	...	.75
Nitrate, USP oz.	.55	.72
Phosphate oz.	...	.65
Sulfate, USP, powd oz.	...	.37
Sugar, refined, 275 lb bbl 100 lb	5.80	5.90
Milk, USP, 200 lb bbls lb.	.18	.20
Sulfonethylmethane, USP, 10 lb boxes lb.	3.85	4.05
Sulonmethane, USP, 10 lb box lb.	2.65	3.85
Sulfur flwrs, washed, USP, 125 lb bbl lb.	...	.06
Iodide, USP, VIII, 5 lb bot lb.	...	4.55
TARTAR EMETIC, USP, 300 lb bbls lb.	.29	.31
Terebene, tins lb.	...	.85
Terpin Hydrate, USP, 100 lb kegs lb.	.35	.37
Theobromine Alk, 5 lb cans lb.	1.90	2.25
Sod. Salicylate, 1 lb bot lb.	...	2.10
Sod. Benzoate, 1 oz vials oz.	...	1.00
Thymol, USP, 25 lb tins lb.	1.35	1.50
Iodide kegs lb.	5.60	6.60
Veratrine Alkaloid oz.	...	2.25
Sulfate, 1 oz vials oz.	...	2.25
Witch Hazel Ext., 50 gal bbl gal.	.60	.80
Zinc Carb, USP, 100 lb keg lb.	.28	.31
Chloride, USP, 25 jars ex lb.	.24	.29
Iodide, 5 lb bottles lb.	...	5.22
Oxide, USP, 100 lb bbls lb.	.13	.14
Stearate, USP, 50 lb bbl lb.	.18	.20
Sulfate, USP, 100 lb bbl lb.	.08	.09
Sulfocarbolate, 100 lb kegs lb.	.23	.26

Miscellaneous

Castor Oil, odorless, bbls lb.	...	.12½
Chalk drop, 175 lb. bbls lb.	...	.03¼
Precip. light, 250 lb. cask lb.	...	.04½
Heavy 540 lb. casks lb.	...	.02½
Bulk ton	...	5.00
English light, bags lb.	...	.04¾
English light, casks lb.	.05½	...
Cocoa Butter, fingers	.24	.26
12 lb. box lb.	23.50	25.00
Cod Liver Oil Nor. 30 gal. bbls	...	31.00
Newfoundland bbl.	...	.23
Collodion U. S. P. 30 lb. dr lb.	...	
Colors certified; 1 lb. cans, 5 lb cans		
Amaranth No. 107 lb.	2.50	2.60
Brilliant Blue F.C.F. lb.	12.75	13.00
Erythrosine No. 517 lb.	16.50	17.00
Orange Ind. 85 lb.	2.50	2.60
Ponceau 3R No. 56 lb.	4.75	5.00
Tartrazine No. 94 lb.	2.50	2.60
Corn Syrup 42° 50 gal. bbl. 100 lb.	3.91	4.16
Gelatin, USP, Silver 100 lb. cases lb.	.55	.60
Pure Food, 50 lb. bbl lb.	.53	.55
Glucose, (grape sugar) dry 70° bags c-l NY 100 lb.	3.14	3.24
Haarlem Oil, bot 6 gross cases gross	...	3.75
Imported, 5 gr. cs gross	...	3.50
Kaolin, Bags lb.	.06	.08
Colloidal Grade 200 lb. tin lined wooden drums lb.	.15	.29
Mineral Oil White, 50 gal. bbls.		
80-85 vis. gal.	.45	.50
85-90 vis. gal.	.65	.70
125-130 vis. gal.	.75	.85
290 vis. gal.	.80	.90
Russian 110-115 vis. gal.	.62	.67
145-155 vis. gal.	.70	.75
320-330 vis. gal.	.80	.90
Olive Oil, Edible bbls. gal.	1.45	1.55
Paraffin Wax, fully refined, slabs		
125 @ 127 A.M.P. bags lb	...	.03
130 @ 132 A.M.P. bags lb.	...	.04
135 @ 137 A.M.P. bags lb.	...	.05
Petrolatum, Lily White, USP, 400 lb. bbl lb.	.08	.08½
Snow White USP, 400 lb. bbls lb.	.09	.11
Rice Starch, 140 lb bags lb.	.09	.10
Soap Castile, bars 40 lb. Case Cs.	...	12.75
Powd. USP 250 lb. bbls lb.	.26	.28
Green, USP, 450 lb. bbls lb.	.07½	.07½
Neutral, powd. 200 lb. bbls lb.	.18	.20
Talc, Italian, 220 lb bags ton.	60.00	80.00
French, 220 lb bags ton.	40.00	45.00

Waxes, See Drugs & Spices

Aromatics and Essential Oils

Acetophenene, CP, 1 lb bot	lb.	3.50	3.65
Aldehyde, C 8 (Otcyl) 1 lb bot	lb.	...	40.00
C 7, 1 lb bot	lb.	4.50	5.50
C 9 (Nonyl), 1 lb bot	lb.	...	120.00
C 10 (Decyl), 1 lb bot	lb.	.	38.00
C 14, 1 lb bot	lb.	.	22.00
C 16, 1 lb bot	lb.	...	16.00
AMYL ACETATE, pure, 25 lb cans	lb.	.43	.50
Butyrate, 1 lb bot	lb.	1.25	1.50
Butyrate, 5 lb bot	lb.	....	1.00
Cinnamate, 5 lb bot	lb.	9.50	9.75
Formate, 1 lb bot	lb.	...	1.75
Formate, 5 lb bot	lb.	...	1.60
Phenyl Acetate, 1 lb bot	lb.	4.50	5.00
Salicylate, 100 lb cbys	lb.	.85	.90
Imported	lb.	2.25	2.50
Anethol, 2 lb bot	lb.	1.10	1.35
Anisic Aldehyde, 1 lb bot	lb.	3.10	3.60
Benzaldehyde, USP, 40 lb cbys	lb.	...	...
50 lb cbys	lb.	1.35	1.45
FFC, 40 lb cbys	lb.	1.25	1.35
Benzoic Ether, see Ethyl Benzoate			
Benzophenone, 1 lb bot	lb.	2.25	2.75
Benzyl Acetate, 100 lb cbys	lb.	.65	.85
Alcohol, 5 lb bot	lb.	.85	.95
BENZYL BENZOATE		1.10	1.15
Medicinal, FFC	lb.	...	1.40
Buytrate, CP, 1 lb bot	lb.	9.25	9.50
Benzyl Cinnamate, 1 lb bot	lb.	7.00	7.25
Formate, 1 lb bot	lb.	3.15	3.25
Propionate, 1 lb bot	lb.	2.50	2.65
Succinate, 1 lb bot	lb.	5.25	5.50
Valerate, 5 lb bot	lb.	3.00	3.25
Borneol, 1 lb bot	lb.	1.35	1.85
Bornyl Acetate, 1 lb bot	lb.	1.70	2.80
Bromstyrol, 25 lb cases	lb.	3.75	3.85
Butyl Anthranilate dom, 1 lb bot	lb.		
Carvol, 5 lb bot	lb.	3.00	3.40
Cinnamic Acid, 5 lb cans	lb.	3.25	3.50
Alcohol liquid, 1 lb bot	lb.	2.50	2.60
Crystallizable	lb.	7.00	8.00
Aldehyde	lb.	2.25	2.50
Imported, 1 lb bot	lb.	7.75	9.00
Citral, 25 lb cans	lb.	1.65	3.00
Citronellal 1 lb bot	lb.	2.00	4.00
Citronelyl Acetate, 1 lb bot	lb.	4.25	4.50
Coumarin, 25 lb cans	lb.	3.50	4.00
DECYL ALCOHOL	lb.	22.00	25.00
Diphenyloxide, 25 lb tins	lb.	1.00	1.15
Diphenyl Methane	lb.	1.75	2.00
Dundecyl Alcohol	lb.	20.00	22.00
Ethyl Acetate, pure, 5 lb bot	lb.	.05½	.06½
Benzoate, 5 lb bot	lb.	1.25	1.50
Ethyl Butyrate, 5 lb bot	lb.	1.80	2.00
Caproate, 1 lb bot	lb.	3.25	3.50
Cinnamate, 1 lb bot	lb.	4.00	4.50
Formate, 5 lb bot	lb.	1.00	1.25
Methyl Paracresol, 1 lb bot	lb.	3.25	3.50
Phenyl Acetate, 5 lb bot	lb.	3.75	4.00
Valerate, 5 lb bot	lb.	...	3.75
Salicylate, 5 lb bot	lb.	1.95	2.00
Eucalyptol, USP, 50 lb cans	lb.	.60	.65
Eugenol, USP, 25 lb cans	lb.	3.00	3.50
Geraniol, 50 lb cases	lb.	1.75	2.35
Geranyl Acetate, 1 lb bot	lb.	2.75	2.80
Butyrate, 1 lb bot	lb.	13.00	13.50
Formate, 1 lb bot	lb.	12.00	12.50
Heliotropin, 100-10 lbs	lb.	1.65	1.75
Imported	lb.	1.95	2.05
Hydroxycitronellal, 1 lb	lb.	4.75	6.75
Indol, CP, 1 oz bot	oz.	2.90	3.00
IONONE, 1 lb bot 100%	lb.	5.00	6.00
Alpha	lb.	4.50	4.70
Beta	lb.	5.70	5.75
Methyl	lb.	5.00	5.25
Iso Borneol	lb.	2.25	2.35
Iso Bornyl Acetate	lb.	3.00	3.20
Iso-Butyl Benzoate, 5 lb bot	lb.	2.75	3.00
Iso-Eugenol, 1 lb bot	lb.	3.50	3.55
Iso-Safrol, 1 lb bot imp	lb.	1.75	1.85
Domestic, 5 lb bot	lb.	3.50	3.75
Linalol from Bois de Rose, 5 lb bot	lb.	3.90	3.90
Linalyl Acetate, 1 lb bot	lb.	2.00	3.00
Benzoate, 1 lb bot	lb.	13.00	14.00
Formate, 5 lb bot	lb.	10.50	12.00
METHYL ACETOPHENONE	lb.	2.00	2.15
Anthranilate, 1 lb bot	lb.	2.15	2.20
Imported	lb.	2.70	2.75
Anthranilic Acid	lb.	8.25	8.50
Benzoate, 5 lb bot imp	lb.	1.25	1.35
Domestic, 5 lb bot	lb.	1.25	1.35
Cinnamate, 1 lb bot	lb.	3.75	4.25
Heptenone, 1 lb bot	lb.	3.50	4.00
Paracresol, 1 lb bot	lb.	4.50	8.00
Phenylacetate, 5 lb bot	lb.	3.75	4.00
Salicylate, USP, 500 lb dr	lb.	...	.40
50 lb cases	lb.		.42
Mirbane rect, 1,000 lb drs	lb.	.12	.13
Musk Ambrette 1 lb cans	lb	6.75	7.00
Ketone 1 lb cans	lb	7.55	7.80
Xylene 5 lb cans	lb.	2.25	2.85
Nerolin 1 lb cans	lb.	1.35	1.40
Octyl Alcohol 1 lb bot	lb.	16.00	18.00
Oenanthic Ether lb bot	lb.	1.90	2.00
Oleoresin Aspidum, USP, bot and tins	lb.	...	1.25
Capsicum, USP, bot and tins	lb.	2.45	3.20
Cubeb, USP, bot and tins	lb.	2.50	2.75
Ginger bot and tins	lb.	2.25	2.75
Malefern see Aspidum			
Orris, bot & tins	lb.	12.00	15.00
Pepper, black, USP, bot & tin	lb.	....	9.50
Vanilla, bot & tins	lb.	7.00	7.75
Paracresol Methyl Ether	lb.	4.25	4.50
Paracresyl Acetate	lb.	5.50	5.75
Para Cymene Refd 110 gal dr	gal.	2.25	2.50
PHENYLACETALDEHYDE 50% 1 lb bot	lb.	4.50	4.75
Imported 50%	lb.	4.50	4.75
100%	lb.	8.00	8.25
Phenylacetic Acid 1 lb bot	lb.	2.65	2.90
Phenyl Diacetate 1 oz bot	oz.	3.00	3.25
1 lb bot	lb.	8.00	10.00
Imported	lb.	7.00	7.75
Phenylethyl Alcohol 1 lb bot	lb.	4.40	4.65
Phenyl Ethyl Acetate	lb.	8.25	8.75
Butyrate 1 lb bot	lb.	15.00	16.00
Formate, 1 lb bot	lb.	19.00	21.00
Propionate, 1 lb bot	lb.	16.00	18.00
Valerate, 1 lb bot	lb.	19.00	20.00
Phenylpropylalcohol, 1 lb bot	lb.	8.50	9.00
Rhodinol, 1 lb bot	lb.	6.25	20.00
Saffrol, drums	lb.	.30	.32
60 lb cans	lb.	.32	.34
Skatol, 1 oz bot	lb.	4.50	7.00
Terpinyl Acetate, 25 lb cans	lb.	.85	.90
Imported, 25 lb cans		.85	.90
TERPINEOL, CP, 1000 lb drs	lb.	.27	.29
50 lb cans	lb.	.31	.33
Absolute, 25 lb cans	lb.	.48	.50
Imported, 25 lb cans	lb.	.58	.60
Valerianic Ether see Ethyl Valerate			
Vanillin (Clove Oil), USP	lb.	5.50	5.75
(Guaiacol) USP	lb.	5.00	5.25

Essential Oils

Almond Bitter, USP, 5 lb bot	lb.	2.15	2.25
Bitter, ffPA, 5 lb bot	lb.	2.25	2.40
Sweet, 56 lb cans	lb.	.42	.45
Almond Meal, 25 lb cans	lb.	.20	.21
Amber crude, 25 lb tins	lb.	.15	.17
Rectified, 25 lb tins	lb.	.50	.53
Amber liquid, 400 lb drs	lb.	2.20	2.30
Ambergris, Black, boxes	oz.	14.00	15.00
Gray boxes	oz.	32.00	36.00
Angelica Root, 1 lb bot	lb.	21.00	31.00
Anise Tech, 400 lb drums	lb.	.37	.39
USP, 60 lb cans	lb.	.39	.41
Apricot Kernel, 50 lb cans	lb.	.26	.27
Bay, 25 lb tins N. F. V., 50.55% Phenol	lb.	1.80	1.95
Terpeneless	lb.	4.25	4.45
BERGAMOT, 25 lb coppers	lb.	1.90	2.10
Terpeneless	lb.	6.25	9.25
Artificial, 25 lb cans	lb.	1.25	1.50
Birch, Sweet, Northern, 25 lb tins	lb.	3.00	3.10
Southern, 25 lb tins	lb.	...	1.85
Birch Tar, rect., 5 lb bot	lb.	.50	.55
Crude, 50 lb tins	lb.	.13	.14
Bois de Rose, tins, Brazillian	lb.	.60	.65
Cayenne, tins	lb.	1.25	1.45
Cade, 25 lb cans	lb.	.25	.26
Cajuput, native, 50 lb tins	lb.	.55	.60
Calamus, 5 lb bot	lb.	2.75	3.00
Camphor Sassa, 1000 lb drs	lb.	.20	.21
White, 400 lb drs	lb.	.17	.18
Cans, 50 lbs	lb.	.19	.20
CANANGA, Native 25 lb tins	lb.	1.45	1.60
Rectified, 25 lb tins	lb.	2.00	2.10
Caraway, USP	lb.	1.50	1.65
Cardamon, NF, 1 lb bot	lb.	16.00	28.00
Cascarilla, USP, 1 lb bot	lb.	65.00	80.00
Cassia, Redist, USP, 50 lb cans	lb.	.95	1.00
Cedar Leaf, 50 lb tins	lb.	.85	1.00
Cedar Wood, light, 1000 lb drs	lb.	.31	.33
Celery, 1 lb bot	lb.	...	7.50
Chaulmoogra, USP 80 lb cases	lb.	...	1.50
Cinnamon Ceylon, 1 lb bot	lb.	9.00	10.00
Leaf, 5 lb bot	lb.	1.85	1.95
CITRONELLA Ceylon, 1000 lb drs	lb.	.33	.35
50 lb tins	lb.	.35	.37
Java, 400 lb drs	lb.	.50	.52
50 lb tins	lb.	.52	.54
Civet, Abyssin, horns	oz.	2.10	3.00
Cloves, USP, 50 lb cans	lb.	1.05	1.10
6 lb bot	lb.	1.20	1.25
Copaiba	lb.	.45	.50
Coriander, USP, 10 lb bots	lb.	4.25	4.50
Croton USP, 25 lb tins	lb.	3.60	4.00
Cubebs, USP, 5 lb bot	lb.	2.55	2.65
Cumin, 1 lb bot	lb.	7.00	7.50
Dill, 25 lb cans	lb.	3.15	4.65
Erigeron, 20 lb tins	lb.	.95	1.05
EUCALYPTUS Austl, USP, 56 ib cans, cases	lb.	.28	.29
500 lb drs	lb.	.26	.27
Fennel, USP, 25 lb tins	lb.	.95	1.10
Geranium African, 25 lb tins	lb.	3.75	4.65
Bourbon, 28 lb tins	lb.	3.50	3.90
Turkish, 28 lb tins	lb.	2.10	2.25
Ginger, 1 lb bot	lb.	4.25	4.40
Gingergrass, 28 lb tins	lb.	2.50	2.70
Grape Fruit	lb.	2.90	3.00
Hemlock, 25 lb tins	lb.	.85	1.00
Juniper Berries, USP, 25 lb tins	lb.	1.35	1.40
Wood, 50 lb tins	lb.	.50	.60
Labdanum, 5 lb bot	lb.	5.50	6.00
LAVENDER, USP, 28 lb tins	lb	1.75	2.00
Spike Spanish, 50 lb cans	lb.	.50	.70
Lemon Ital, 25 lb cans	lb.	1.00	1.05
California 35 lb cbys	lb.	.75	.85
Lemongrass, native, 50 lb cans	lb.	.51	.53
Limes, expressed, 25 lb tins	lb.	11.50	13.50
Distilled, 25 lb tins	lb.	7.70	8.70
Linaloe Mex., 70 lb cases	lb.	...	1.75
Mace, distilled, 50 lb tins	lb	1.00	1.05
Mandarin, 25 lb cases	lb.	4.20	4.70
Musk Pods Cabardine, tins	lb.	...	...
Musk Tonquin, tins, Pods	oz.	24.00	26.00
Grains Cabardine, tins	oz.	...	...
Tonquin, tins, Grained	oz.	28.00	34.00
MUSTARD, USP, 1 lb bots	lb.	8.50	9.00
Artif, USP, 5 lb bot	lb.	1.50	1.60
Neroli Bigarade, ¼ & ½ & 1 lb bot	lb.	80.00	110.00
Petale, 1 lb bot	lb.	95.00	105.00
Artificial, 1 lb bot	lb.	5.00	15.00
Nutmeg, USP, 50 lb tins	lb	1.00	1.05
ORANGE BITTER, 25 lb tins	lb	1.80	2.15
Sweet W Ind, 25 lb tins	lb	1.55	1.80
Italian, 25 lb cop	lb	1.70	2.10
Orange American, Cold pressed 25 lb tins	lb.	1.70	1.80
Distilled, 25 lb tins	lb.	.90	1.00
Spanish, 25 lb tins	lb.	...	1.50
Oil Orris, concrete	oz.	4.75	5.00
Origanum, 50 lb cans tech	lb.	.25	.27
Parsley, 1 lb bot	lb.	6.50	6.75
Patchouli, 5 lb bot	lb.	4.00	4.35
Pennyroyal, dom, 25 lb tins	lb.	1.75	1.95
Imported, 25 lb tins	lb.	...	1.05
Pepper Black lb.		...	6.00
Peppermint, nat. 60 lb cases	lb.	1.50	1.55
Redis, USP, 60 lb cs	lb.	1.70	1.75
Petit Grain S A., 25 lb tins	lb.	1.00	1.10
French, 1 lb bot	lb.	4.50	4.75
Italian, 25 lb tins	lb.	2.20	2.30
Pimento Leaf, 25 lb tins	lb.	1.35	1.50
Berries 25 lb tins	lb	3.00	3.10
Pine Needle Siberian, cans	lb.	.58	.63
Pinus, Sylvestris, 25 lb tins	lb.	1.30	2.00
Pumilio, USP, 25 lb tins	lb.	1.90	1.95
Rose Fr, 8, 16, & 32 oz pkgs	lb.	14.00	17.00
Bulg, 8, 10 & 32 oz pkgs	oz.	7.75	14.00
Rosemary, USP, 27½ lb tins	lb.	...	.47
1000 lb drums	lb.	...	.46
Tech, 25½ lb tins	lb.	...	.34
Rue, 1 lb bot	lb.	2.25	2.50
SANDALWOOD, E Ind, USP, 100 lb case	lb.	6.50	7.25
W Indian (Amayris), 25 lb tins	lb.	2.85	2.95
Australian, Tins		5.65	5.65
Sassafras, USP, 50 lb cans	lb.	1.05	1.07
Artificial, 1000 lb drs, 60 lb cans	lb.	.27	.29
Safrol, cans	lb.	.36	.38
Sage, Dalmatian, 25 lb. cans	lb.	2.15	2.25
Savin, 50 lb tins	lb.	2.00	2.25
Snakeroot, Canada	lb.	8.25	8.50
SPEARMINT, USP, 50 lb tins	lb	1.35	1.45
Spruce, 50 lb tins	lb	.90	.95
Tansy, American, 25 lb tins	lb.	2.15	2.30
Tar, 50 gal bbls		.25	.30
USP, 50 gal bbls	lb.	.75	1.50
Thyme, red, NF, 25 lb tins	lb.	.80	.95
White, NF, 25 lb tins	lb.	.90	1.00
Tech, 110 lb drums	lb.	.70	.75
Turpentine, USP, rect cbys	lb.	.27	.30
Vetivert Bourbon, 10 bot	lb.	4.75	5.00
Indian, 1 lb bot	lb.	25.00	38.00
Java, 1 lb bot	lb.	12.00	13.00
Wine, heavy, 1 lb bot	lb.	1.50	1.60
WINTERGREEN Gaultheria, true, 25 lb tin	lb.	8.00	10.00
Southern, 25 lb tins	lb.	3.75	4.00
Synthetic see Methyl salicylate			
Wormseed, Balt, 25 lb tins	lb.	2.25	2.35
Wormwood, dom, 25 lb tins	lb.	3.85	4.10
Ylang Ylang Bourbon, 10 lb tins No. 1	lb.	5.25	5.50
10 lb tins No. 2	lb.	5.20	5.25
Manila, 1 lb bot	lb.	30.00	36.00

Drugs and Spices

Aconite Root, USP, bags	lb.	.13 .14
Agar Agar, No. 1, bales	lb.	1.05 1.10
Agar Agar No. 2, bales	lb.	1.00 1.02
Almonds Meal	lb.	.25 .30
Aletris Root, bags	lb.	.20 .21
Alkanet Root, bags	lb	.09 .10
ALOES, Cape, 400 lb cases.	lb.	.11 .12
Curacao, 140 lb cases	lb.	.18 .20
Socotrine, Whole, 300 lb cs	lb.	.32 .37
Althea Root, bags	lb.	.19 .21
Cut cases	lb.	.18 .25
Angelica Root, bags	lb.	.12 .13
Angostura Bark, bags	lb	.18 .19
Anise Star case	lb	.12 .13
Spanish, bags	lb	.07 .08
ARABIC GUM, White, No. 1, 220 lb bags	lb.	.17 .18
Seconds, 220 lb bags	lb.	.15 .16
Sorts, Amber, 220 lb bags	lb.	.07 .07½
Powd, USP, 300 lb bbls	lb.	.12 .15
Areca Nuts, 100 lb bbls	lb.	.05 .07
Powd, 100 lb bbls	lb.	.10 .11
Arnica Flowers, bales	lb.	.10 .11
Root, bags	lb.	.42 .43
Arrowroot, St. Vincent, powd bbls	lb.	.10 .11
Asafoetida, 250 lb cases	lb.	.18 .19
Powd, 50 lb boxes	lb.	.29 .30
Balm Gilead Buds, bags	lb.	.25 .26
Balmony Herbs, bales	lb.	.13 .15
BALSAM COPAIBA Para, 80 lb cases	lb.	.17 .18
South American, USP, 80 lb cases	lb.	.... .24
Peru, 120 lb cases	lb.	1.10 1.15
Tolu, 90 lb cases	lb.	.70 .80
Barberry Bark, of root, bags	lb.	.16 .18
Bayberry Bark, bales	lb.	.08 .09
Wax bbls	lb.	.17 .19
BELLADONNA LEAVES, bale	lb.	.13 .15
Root, bags	lb.	.11 .12
Bees Wax, White, cases	lb.	.38 .42
Yellow refined cases	lb.	.25 .27
Yellow Crude Cases	lb	.17 .18
Benzoin Gum, Siam, boxes	lb.	1.15 1.25
Sumatra, cases	lb.	.24 .26
Berberis Aquafolium Root, bags	lb.	.08 .09
Beth Root, bags	lb.	.09 .10
Black Indian Hemp Root, 100 lb bags	lb.	.11 .12
Blood Root, bags	lb.	.11 .12
Blueflag Root, bags	lb.	.13 .14
Boldo Leaves, bales	lb.	.15 .17
Boneset Herb, bales	lb.	.08 .09
Borage Flowers, bales	lb.	.13 .14
Broomtop Herb Cut, bales	lb.	.07 .08
Bryonia Root, bags	lb.	.09 .10
BUCHU LEAVES Short, 250 lb bales	lb.	.16 .17
Long bales	lb.	.75 .80
Buckbean Leaves, bales	lb.	.08½ .09
Buckthorn Bark, bags	lb.	.05 .06
Berries, bags	lb.	.29 .34
Burdock Root, bags	lb.	.08 .09
Seed bags	lb.	.30 ...
Burgundy Pitch, 110 stand gross for net	lb.	.08 .09
Imported	lb.	.10 .11
Calabar Beans, bags	lb.	.15 .16
Calamus Root, blchd cases	lb.	.30 .35
Unbleached, bags	lb.	.07 .08
Calendula Petals, imp bales	lb.	.28 .33
Calisaya Bark, bales	lb.	.19 .20
Powdered, bbls	lb.	.25 .26
Canary Seed, South America, bags	lb.	.05 .05½
Dutch, bags	lb.	.05 .06
Candelilla Wax, bags	lb.	.14 .15
Cannella Alba Bark, bales	lb.	.25 .26
Cannabis, U.S.P.	lb	.18 .25
Cantharides, Chinese, cases	lb.	.35 .40
Powdered, boxes	lb.	.60 .65
Russian, cases	lb.	1.15 1.20
Powdered, boxes	lb.	1.30 1.40
Caraway Seed, African, bags	lb.	.04½ .05½
Dutch, 11 lb bags	lb.	.06¼ .06½
Cardamon bleached, cases	lb.	1.00 1.05
Decorticated, cases	lb.	.52 .53
Carnauba Wax No. 1, 100 lb. bags	lb.	.27 .29
Cascara Amarga, 150 lb bbls	lb.	Nom ...
So called bales	lb.	.50 .75
CASCARA SAGRADA, 1929 bark	lb.	.17 .18
1930 bark	lb.	.16½ .18
1931 bark	lb.	.09 .09½
Cascarilla Bark, quills, bales	lb.	.75 .85
Siftings, bbls	lb.	.65 ...
Cassia Batavia No. 1 bbls	lb.	.08¼ .08½
Shortstick, bales	lb.	.07½ .07½
Batavia No. 3, bales	lb.	.06½ .07
China Select Rolls, cases	lb.	.03 .03½
Broken, bales	lb.	.05½ .05¾
Saigon, thin	lb.	.20 .21
Buds, cases	lb.	.20 .22
Fistula, baskets	lb.	.09 .10
Catnip, Herb, bales	lb.	.16 .17
Celery Seed, bales	lb.	.17½ .18
Ceresin Wax, White, bags	lb.	.10 .15
Yellow 200 lb. bags	lb.	.09 .12
Imp. 100 lb. bags	lb.	.25 .38
CHAMOMILE FLOWERS Roman, bales	lb.	.32 .35
Hungarian, cases	lb.	.14 .16
Charcoal Willow, powd, bbls	lb.	.06 .06½
Wood, powd, bbls	lb.	.04 .05
Chestnut Bark	lb.	.07 .08
Leaves bales	lb.	.05 .05½
Chicle Gum, lb bbls	lb.	.32 .40
Chiretta, bales	lb.	.14½ .17½
Cinnamon, Ceylon, No. 1, bales	lb.	.15 .16
No. 2 bales	lb.	.12 .12½
No. 3 bales	lb.	.11½ .12
Clover Tops, Red, bags	lb.	.10 .11
Cloves Zanzibar, 135 lb bbl	lb.	.15 .15½
Cochineal, Black	lb.	.60 ...
Silver	lb.	.75 ...
Cohosh Root, Black, bags	lb.	.05 .06
Blue, bags	lb.	.06 .07
Colchicum Root, bags	lb.	.10 .12
Seed, bags	lb.	.05 .06
COLOMBO ROOT, bags	lb.	.05 .06
Colocynth Pulp, bales	lb.	.18 .19
Coltsfoot Leaves, bags	lb.	.06 .07
Comfrey Root, bags	lb.	.10 .11
Condurango Bark, bags	lb.	.09 .10
Coriander Seed, Morocco, bags	lb.	.03½ .04
Bleached, bags	lb.	.05½ .06
Corn Silk, bales	lb.	.05 .06
Cotton Root Bark, bales	lb.	.06½ .07½
Cowhage, 1 oz tins	lb.	1.00 ...
Cramp Bark so called bales	lb.	.05 .06
True, bags	lb.	.26 .28
Cranesbill Root, bags	lb.	.07½ .08
CUBEB BERRIES, XX bags	lb.	.32 .33
Powdered, boxes	lb	.34 .35
Culvers Root, bags	lb.	.11 .12
Cumin Seed, Malta, bags	lb.	.12½ .12¾
Morocco, bags	lb.	.06½ .07
Cuttlefish, Bone Trieste, Straps	lb.	.19 .22
French, boxes	lb.	.18 .21
Powdered, bbls	lb.	.09 .10
Broken, bales	lb.	.07 ...
Damiana Leaves, bales	lb.	.15 .16
Dandelion Root, Imp. bags	lb.	.11 .12
Deer Tongue Leaves, bales	lb.	.08 .10
Digitalis Leaves, bales	lb.	.10 .11
Dogwood Bark, Jamaica bags	lb.	.08 .09
American bales	lb.	.06½ ...
Doggrass Root, USP, cut bags	lb.	.14½ .15
Dragons Blood Mass, cases	lb.	.65 .70
Reeds, boxes	lb.	.90 .95
Echinacea Root, bags	lb.	.16 .17
Elcampane Root, bags	lb.	.05 .06
Elder Flowers, bags	lb.	.21 .24
Elemi Gum, 85 lb cases	lb.	.26 .28
Elm Bark, bundles	lb.	.19 .22
Grinding bags	lb.	.09 .10
Powdered, bbls	lb.	.16 .18
Ephedra Vulgaris, bales	lb.	.06 .07
ERGOT, 150-200 lb bags	lb.	.45 .63
Eucalyptus Leaves, bales	lb.	.05 .06
Euphorbia Pilulifera, Herb, bags	lb	.05 .08
Euphorbium Gum, cases	lb.	.14 .20
Fennel Seed, French, bags	lb.	.07¼ .07¾
German bags	lb.	.08 .10
Foenugreek Seed, 200 lb bags	lb.	.04 .04½
Fish Berries, 100-125 lb bag	lb.	.06 .07½
Flax Seed, Whole	182 lb bbls.	14.50 15.25
Ground, 180 lb bbls	lb.	.06 .06½
Fringe Tree Bark or Root bags	lb.	.11 .13
Fumigating Pastiles, boxes	lb.	.28 .33
Galangal Root, bags	lb.	.08 .09
Galbanum Gum, cans	lb.	.84 .87
Gamboge Gum, 100 lb cases	lb.	.65 .70
Powdered, cases	lb.	.80 .85
Gelsemium Root, bags	lb.	.07 .08
GENTIAN ROOT, bags	lb.	.07 .08
Ground bbls, boxes	lb.	.10 .11
Powdered, bbls, boxes	lb.	.10 .11
Ginger, African, bags	lb.	.05½ .06
Jamaica Grinding bags	lb.	.08¼ .08½
Cochin ABC & Lemon, bags	lb.	.07¼ .07½
Ginseng Root, cultivated cs	lb.	8.00 10.00
Wild Southern, cases	lb.	... 16.00
Golden Seal Root, bags	lb.	.70 .75
Powdered, boxes	lb.	1.20 1.25
Herb, barrels	lb.	1.25 1.30
Grains of Paradise, bags	lb.	.11 .14
Grindelia Robusta, Herb, bale	lb.	.07 .08
Guaiac Gum, 150 lb cases	lb.	.25 .26
Strained 75 lb cases	lb.	.70 .75
Guarana, tin cases	lb.	.75 1.00
Hellebore Root, Black, bbls	lb.	.05½ .06
White, 250 lb bbls	lb.	.07½ .08½
Powdered	lb.	.11 .12
Helonias Root, bags	lb.	.30 .32
Hemp Seed, bags	lb.	.03½ .03¾
Henbane Leaves, USP, bales	lb.	.09 .10
HENNA LEAVES, bales	lb.	.07½ .08½
Powdered	lb.	.11 .12
Hops, bales	lb.	.21 .24
Horehound, Herb, bales	lb.	.07 .08
Hydrangea Root, bales	lb.	.06 .07
IPECAC ROOT, Carteagna, bags	lb.	1.00 1.05
Powdered, 220 lb bbls	lb.	1.20 1.30
Isinglass, American, 130 lb cases	lb.	.95 1.00
Russian (Beluga), boxes	lb.	4.50 ...
Jaborandi Leaves, bales	lb.	.07½ .08
Jalap Root, Whole, 150 lb bag	lb.	.18 .20
USP, Powd, 250 lb bbls	lb.	.23 .26
Japan Wax 224 lb cases	lb.	.10 .11
JUNIPER BERRIES, 125 lb bags	lb.	.04½ .05
Kamala, boxes	lb.	.50 .55
Karaya Gum, Powdered, bbls	lb.	.15 .20
Kava Kava Root, bags	lb.	.13 .14
Kino Gum, Black, cases	lb.	.50 .55
Kola Nuts, 150 lb bags	lb.	.05½ .06
Lady Slipper Root, bags	lb.	.40 .45
Larkspur Seed, bags	lb.	.30 .35
Laurel Berries, bags	lb.	.08 .09
Leaves, Greek, bags	lb.	.05 .05½
Italian, bales	lb.	.08 .09
Lavender Flowers, Ordinary	lb.	.18 .20
Selected	lb.	.29 .31
Lemon Peel, bags	lb.	.08 .09
LICORICE ROOT, Whole bbls	lb.	.12 .15
Spanish Natural bales	lb.	.05½ .07
Powdered, bbls	lb.	.08 .10
Selected 2 & 5 lb bdls	lb.	.12 .15
Cutting, 125 lb bags	ln.	.06 .06½
Turkish, 150 lb bales	lb.	.05 ...
Linden Flowers with leaves, bales	lb.	.18 .19
Without leaves, bales	lb.	.23 .24
Liverwort Leaves, bales	lb.	.14 .15
Lobelia, Herb, bales	lb.	.09 .10
Seed, bags	lb.	.21 .26
Lovage Root, Imp., bags	lb.	.15 .17
Lupulin N. F., tins	lb.	1.25 1.30
Lycopodium, 88 lb. cases	lb.	.30 .32
MACE SIAUW, No. 1, cases	lb.	.31 .32
Banda No. 1, cases	lb.	.38 .40
Batavia No. 2, cases	lb.	.31 .32
Malva Flowers, Blue, bales	lb.	.75 .85
Black, bales	lb.	.25 .40
Leaves, bales	lb.	.12 .13
Manaca Root, bales	lb.	.22 .23
Manna, Large Flake, cases	lb.	.50 .56
Small Flake, cakes	lb.	.35 .38
Sorts, cases	lb.	.45 .50
Mandrake Root, bags	lb.	.08 .09
Marjoram, Herb	lb.	.13 .13½
French, No. 1 bales	lb.	.14 .14½
German, bales	lb.	.40 .45
Mastic Gum, 120 lb cans	lb.	.20 .23
Matico Leaves, bales	lb.	.15 .16
Mezereon Bark, bags	lb.	.02½ .03
Millet Seed, Yellow, bags	lb.	.05 .06
Montan Wax, Crude, bags	lb.	.26 .28
Bleached, bags	lb.	.09 .11
Moss, Iceland, bales	lb.	.10 .12
Irish, Bleached, bales	lb.	.75 .80
Mullein Flowers, tins	lb.	.07 .07½
Leaves, bales	lb.	.07 .08
Musk Root, Russian, bags	lb.	.16 .18
Myrrh Gum, 200 lb, cases	lb.	.22 ...
Nutgalls, Chinese, bags	lb.	... Nom.
Aleppy, bags	lb.	.18 ...
Powdered, bags	lb.	.12 .12½
Nutmegs, 110's cases	lb.	.15 .15½
75's & 80's cases	lb.	.18 .19
Grinding, bags	lb.	.05 .06
NUX-VOMICA Buttons, bag	lb.	.08 .09
Powdered, 200 lb bbls	lb.	.06 .06½
Oak Bark, bags	lb.	.23 .24
Olibanum Gum, 280 lb cases	lb.	.07½ .08½
Siftings	lb.	.16 .18
Tears, No. 1 Extra	lb.	.12 .13
No. 2	lb.	12.00 13.00
No. 3	lb.	13.00 14.00
Opium Gum, USP, cases	lb.	13.00 14.00
Granular, cans	lb.	.25 .30
Powdered, USP, cans	lb.	.08 .09
Orange Flowers, cases	lb.	.07 .08
Peel, Bitter, bags	lb.	.11 .12
Sweet bags,	lb.	.14 .15
ORRIS ROOT, Flor. bid. bags	lb.	.09 .09½
Powdered, 200 lb bbls	lb.	.12 .13
Verona, bags	lb.	.90 .95
Powdered, 200 lb bbls	lb.	... ...
Fingers, boxes	lb.	.24 .25
Ozokerite Wax, Brown, Hard	lb.	.25 .27
Bags	lb.	.33 .34
Green, Hard, bags	lb.	2.15 2.20
Yellow, Refined, bags	lb.	2.30 2.35
Papain, Crude, 150 lb cases	lb.	.20 .20½
Pure, Powdered, 10 lb bot	lb.	.13 .14
Paprika, bags	lb.	.04½ .05½
Pareira Brava Root, bags	lb.	.15 .16
Passion Flower, bales	lb.	.08 .09
Patchouli Leaves, bales	lb.	.12 .13
Pennyroyal, Herb, 100 lb bags	lb.	
Leaves, 100 lb bags	lb.	

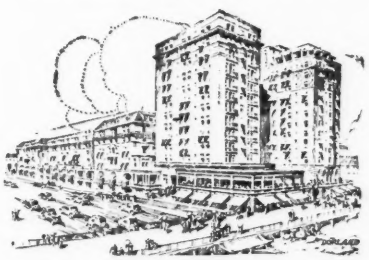
Drugs and Spices

PEPPERMINT LEAVES, Imp bales	lb.	.30	.40
Domestic, bales	lb.	.24	.28
Pichi Leaves, bags	lb	.10	.11
Pimento Select, bags	lb.	.05¾	.06
Pink Root, True, bags	lb.	.32	.34
Pleurisy Root, bags	lb.	.15	.16
Poke Berries, bags	lb.	.14	.15
Root, 200 lb bales	lb.	.06	.06½
Pomegrant Bark of Root, bags	lb.	.29	.34
Bark of Fruit, bags	lb.	.20	.25
Bark of Tree, bags	lb.	.15	.18
POPPY FLOWERS, Red, bags	lb.	.45	.50
Prickly Ash Bark	lb.	.12	.15
Southern bags	lb.	.11	.11½
Northern, bags	lb.	.11	.12
Berries, bags	lb.	.20	.21
Prince's Pine, bales	lb.	.15	.20
Psyllium Seed, Black, bags	lb.	.22	.27
Plantago Seed, Blonde, Bags	lb.	.08	.10
Pulsatilla, Herb, bags	lb.	.10	.11
Pumpkin Seed, bags	lb.	.11	.12
Pyrethrum Flowers	lb.	.18	.19
Pwd., pure, 200 lb.bbls.	lb.	.22	.23
Quassia Chips, bags	lb.	.05¾	.06¼
Quebracho, bulk, 125 lb. bbl.	lb.	.20	.21
Quince Seed, Spanish bags	lb.	1.05	1.30
Persian, bags	lb	1.35	1.80
Rape Seed, South American, bags	lb.	.05¼	.06
Dutch, bags	lb.	.06	.06½
Raspberries, Dried, bbls.	lb.	.50	.55
Red Saunders, bags	lb.	.08	.09
Rhatany Root, bags	lb.	.10	.11
Rhubarb Root, HD, cases	lb.	.20	.21
Powdered, bbls.	lb	.25	.27
Rosemary Leaves, bales	lb.	.05	.05½
Flowers, cases, bales	lb.	.28	.32
Rose Petals, pale	lb.	.14	.15
Red	lb.	.50	.55
Rue, Herb, bales	lb.	.18	.20
Sabadilla Seed, bags	lb.	.17	.18
Powdered, bbls.	lb.	.19	.19½
SAFFRON FLOWERS, American, bales	lb.	.21	.22
Valencia, 1 lb cans	lb.	13.50	14.00
Sage Dalmatian, bales	lb.	.05½	.06
Sandarac Gum, 300 lb bbls.	lb.	.30	.35
Sarsaparilla Root, Honduras, bales	lb.	.60	.65
Mexican, bales	lb.	.13	.14
Sassafras Bark, Ordinary, bales	lb.	.08	.10
Select, bales	lb.	.16	.17
Savory Leaves, bale	lb.	.05½	.06½
Saw Palmetto Berries, bags	lb.	.07½	.08½
Scammony Resin, boxes	lb.	1.30	1.35
Root, bags	lb.	.07	.08
Senega Root, bags	lb.	.33	.35
SENNA ALEX., 150 lb cases	lb.	.20	.25
Half leaf 150 lb bales	lb.	.10	.12
Sifting, 400 lb bales	lb.	.08	.09
Tinnevelly, Bold, 350 lb bales	lb.	.10	.12
Medium Leaf	lb.	.08	.09
Small Leaf	lb.	.06	.08
Pods, 350 lb	lb.	.09	.10
Powdered, 200 lb	lb.	...	.10
Serpentaria Root, bags	lb.	.35	.36
Simaruba Bark, bales	lb.	.24	.26
Skullcap Leaves, Eastern, bales	lb.	.28	.33
Western, bales	lb.	.17	.27
Skunk Cabbage, Natural, bales	lb.	.12	.14
Snake Root, Canada Natural, bags	lb.	.18	.19
Canada, Stripped, bags	lb.	...	.50
Soap Bark	lb.	.12	.13
Cut, 125-175 lb bags	lb.	.08	.09
Crushed, 200 lb bbls.	lb.	.16	...
Powdered, bbls.	lb.	.12	.13
Spearmint Leaves, American, bales	lb.	.22	.23
Spermaceti, blocks, cakes, cases	lb.	.21	.23
Bulk	lb.	.20	.22
Spikenard Root, bags	lb.	.08	.09
Squaw Vine, bales	lb.	.12	.13
Squills, White	lb.	.05	.06
Powdered, bulk	lb.	.16	.18
Stavesacre Seed, bags	lb.	.13	.14
Stillingia Root, bags	lb.	.07½	.08
Stone Root, bags	lb.	.07	.08
St. Ignatius Beans, bags	lb.	...	Nom.
St. John's Bread, bags	lb.	...	.09
STRAMONIUM LEAVES, bales	lb.	.09	.10
Seed, bags	lb.	.07½	...
Strophanthus Seed, Kombe, bags	lb.	1.80	2.00
Styrax Liquid, Artificial	lb.	.26	.35
Genuine, USP	lb.	.38	.43
Sunflower Seed, bags Calif.	lb.	.04½	.05
South American, bags	lb.	.07	.07½
Tamarinds, bbls.	lb.	.05	.06
Kegs	keg	3.75	3.85
Tansy, Herb, bales	lb.	.12	.13
Thus Gum, 280 lb bbls.	lb.	.07½	.16½
THYME, Spanish, bales	lb.	.06	.07
French, bales	lb.	.05¾	.06¼
Tonga Root, bundles	lb.	.25	.26
Bark, bundles	lb.	.20	.21
Tonka Beans, Angostura Cases		1.50	1.65
Para cases	lb.	.70	.75
Surinam cases	lb.	.75	.80
Tragacanth Gum, No 1, 100 lb. cases	lb.	1.10	1.15
No. 2	lb.	.95	1.05
No. 3	lb.	.75	.85
Powdered, 50 lb boxes	lb.	.70	.80
Turkish cases	lb.	.45	.90
Turmeric Root Madras, bags	lb.	.06	.06½
Aleppy bags	lb.	.05½	.06
Powdered	lb.	.11	.13
China bags	lb.	.11	.12
Turpentine Venice True, 80 lb cases	lb.	.32	.40
Artificial, 80 lb cases	lb.	.17	.18
Uva Ursi Leaves, bales	lb.	.05	.05½
Valerian Root, Belgium bags	lb	.10	.12
VANILLA BEANS, Mexican, whole, cases	lb.	3.75	4.25
Cuts, cases	lb.	2.50	2.65
Bourbon, cases	lb.	.90	1.40
Vetivert Root, 100 lb bags	lb.	.25	...
Violet Flowers, bags	lb.	.80	.85
Wahoo Bark of Root, bags	lb.	.32	.33
Bark of Tree, bags	lb.	.19	.20
White Pine Bark, Roseed, bags	lb.	.06	.08
White Poplar Bark, bags	lb.	.06	.07½
Wild Cherry Bark, Natural thin, Green	lb.	.06	.07
Rossed bales	lb.	.09	.10
Thick Rossed, bales	lb.	.04	.05
Wild Indigo Root, bags	lb.	.09	.10
Willow Bark, bags	lb.	.05	.05½
White, bags	lb.	.15	...
Witch Hazel Bark, bags	lb.	.05	.06
Leaves, bales	lb.	.06	.07
Wormseed, American, bags	lb.	.05½	.06
Wormwood, Herb, Imp., bales	lb.	.08	.08½
Yellow Dock Root, bags	lb.	.07	.08
Yerba Mate, bags	lb.	.14	.16
Santa, bags	lb.	.07½	.08½

THE ST. CHARLES

On the Boardwalk at New Jersey Avenue

ATLANTIC CITY



A Smart Hotel in America's Smartest Resort

No place like Atlantic City to get rid of a cold. A stay at the St. Charles—leading winter resort hotel, with the longest sun deck on the ocean front—is health insurance.

Ideal Convention Facilities
Attractive Rates

A New Vitamin Source

(*Continued from page 83*)

administration and the nausea and gastric distress from cod liver oil.

In many cases of malnutrition the patients require an abundance of these essential vitamins but will not tolerate the large amounts of cod liver oil required to supply them. The product supplied by Abbott Laboratories and Parke, Davis & Company under the patents applied for covering the process and the products developed as the result of their co-operative research, are called "Haliver Oil with Viosterol 250 D. The product is supplied in 5 cc. containers supplied with a special dropper, and also in soft gelatin capsules, each containing 3 minims (10 drops). Each capsule is equal in vitamin A potency to 3 teaspoonfuls of cod liver oil, and contains the same amount of vitamin D units as 10 drops of Viosterol 250 D.

Naturally this product will permit of very large doses of both vitamins A and D under the directions of the physician, and concentration of vitamin A in the product is as large as is desired. The means of obtaining high concentrations up till now have been by the concentration of the vitamins present in cod liver oil, and by the announced, but still experimental synthesis of vitamin A from carotin. The manufacturers of the product indicate in addition to the two vitamins contained in the product, vitamin C can be supplied by the feeding of orange or lemon juice.

The Drug Market-Place

Wants and Offers

Business Opportunities

WILLIAM V. SLAVIN

Manufacturers' Sales Representative, 401 N. Broad St., Philadelphia, Pa. Personally covering Pennsylvania, New Jersey, Delaware, Maryland, Washington, D. C., calling on the wholesale drug, chain, department stores, surgical and physician's supply houses.

BLOND FLEA SEEDS

Agents wanted by an Indian Firm in all principal cities for handling the above product. Firms dealing in this line and with good references are requested to communicate with Box 844, DRUG MARKETS.

Manufacturing chemists. Private formula. Private label. Factory, laboratory New York. Southport Chemical Co., 261 Greenwich Street, New York City.

New England REPRESENTATIVE for a leading essential oil house for past eight years is open for a new connection. Highest references. Box 846, DRUG MARKETS.

Merchandise Wanted

CASH FOR SURPLUS—Chemicals, Oils, Drugs, Waxes, Glues, Metals, Aromatics, Solvents, Bottles, Jars, Finished Products, Specialties of all kinds. By-Products, Residues. Entire plants. Confidential services when required. Chemical Service Corp., 36 Park Row, New York, N. Y.

Patents

PATENT YOUR IDEAS REGISTER YOUR TRADE-MARK BY Z. H. POLACHEK 1234 BROADWAY 31st, NEW YORK

REG. PATENT ATTORNEY PROF. ENGINEER

WHAT IS YOUR INVENTION?

Send me a simple sketch or a model for Confidential Advice—Do It Now!

Miscellaneous

SUPERIOR Safety Razorblade Lifetime SHARPENER—*Distributors wanted, here and abroad, to sell millions of them on cash basis.* RUDDIES Manufacturing Co., 2437 Adams St., Chicago, Ill.

Rates—All classifications $1.00 an issue for 20 words or less; additional words 5c each.

Payment must accompany order. Add 10 cents if replies are to come to a box number and be forwarded.

DRUG MARKETS
101 West 31st St. New York

Situations Wanted

SALESMAN, PHARMACIST, chemicals, drugs or allied lines. Competent. Go anywhere. Box 845, DRUG MARKETS.

PHARMACIST and CHEMIST desires part time work. Has six years of industrial experience covering analytical, research and plant work. Philadelphia or vicinity. Box 847, DRUG MARKETS.

CHEMICAL and LAW GRADUATE. Age 30, with considerable experience. Will go anywhere, consider anything. Box 848, DRUG MARKETS.

CHEMIST, extensive experience in powders, creams, lotions and perfumes can supply, duplicate and originate formulas. Box 849, DRUG MARKETS.

REGISTERED PHARMACIST, with extensive experience in manufacturing trade, familiar with Private Formula work, desires position. No objection to traveling into assigned territory. Speaks German fluently. Education, references on request. Box 839, DRUG MARKETS.

CHEMIST, 5 years' experience in manufacture of toilet preparations and perfumes, executive ability, desires connection. Moderate salary acceptable, with chance for advancement. Box 838, DRUG MARKETS.

Used Machinery

FOR SALE—Arthur Colton Tablet Machine 2B Serial No. 667 in excellent condition like new with *direct motor drive; Arthur Colton* hand tube filling machine clipper and closer; also 100,000 nickel *plated steel clips, sample will be sent on request.* Apply Sano Laboratories, Inc., 31-33 Governor St. Newark, N. J.

Professional Service

Consulting Chemists

? VITAMIN $\frac{A}{D}$ UNITS ?

Check the potency of your **cod liver oil** by biological assays, reliably conducted according to approved American methods. Fees are reasonable and will be submitted on request.

FOOD RESEARCH LABORATORIES, Inc.
Philip B. Hawk, Director

114 E. 32nd St.
New York City

Member Ass'n Consulting Chemists and Chemical Engineers.

LAWALL & HARRISSON
Charles H. LaWall Jos. W. E. Harrisson
Analytical and Consulting Chemists
Pharmaceutical and Chemical Research
Process and Formula Development
Food, Drug and Water Analyses
Legal Testimony
214 South 12th Street Philadelphia, Pa.

H. A. Seil, Ph. D. E. B. Putt, Ph. C., B. Sc.

SEIL, PUTT & RUSBY, Inc.

Analytical and Consulting Chemists
Formerly Experts for U. S. Dept. of Agriculture
Official Chemists, Olive Oil Ass'n of America

Analyses Made Formulas Developed
Research Investigations Conducted

Specialists in the Analysis of

Beverages	Essential Oils
Flavoring Extracts	Toilet Preparations
Foods Spices	Drugs
Proprietary Medicines	Special Formulas

Pyrethrum Insecticides

Lab's: 16 East 34th St. New York, N. Y.
Telephone: AShland 4-4343

FOSTER D. SNELL, Inc.
Chemists-Engineers
A technical organization offering complete consulting, research, operating and management service.
130 Clinton Street Brooklyn, New York

School of Pharmacy University of Ma

Aaro, Inc.—166
Abbe, Inc., Paul O.—448, 554.
Abbott Laboratories—37, 53, 162, 254, 262, 278, 370, 572, 578.
Absorption Bases—31, 81, 444
Acetanilid—378.
Acetylcholin—482, 590.
Acetylsalicylic Acid—591.
Adams Chem. Labs.—370.
Adonis Vernalis—588.
Adrenalin—189, 190.
Advance Labs.—53.
Advertising—59, 176, 258, 377, 464.
Aesculap Pharm. & Chem. Co.—572.
Affiliated Products, Inc.—30 49, 262, 578.
Agar agar—67, 184, 266, 380, 466.
Agee on Something (edit.)—507.
Albrecht Import Co.—294.
Albuminous Materials—285.
Alcohol—65, 177, 266, 380, 465; Consumption, 57; Isopropyl, 433; Regulations, 577.
Alcorub—229.
Al-Green Medicine Co.—476.
Alje Labs.—230, 294.
Alkaloids—81, 189, 286, 389, 487, 591.
Allen, W. M.—47.
Alloxan—528.
Alloy Prods. Corp.—464.
Almond Oil—182.
Aloin—466.
Alsop Engineering Co.—48, 370.
Aluminum Corp.—142, 258.
Ambergris—326.
Ambruster, Howard W.—53.
Amco Labs.—372.
Amer. Assoc. Adv. Science—51.
Amer. Beauty Co.—256.
Amer. Chem. Soc.—48, 242, 390, 454.
Amer. Com. Alcohol Co.—49, 376, 478.
Amer. Drug Manufs. Assoc.—59, 249, 361, 449, 456.
Amer. Druggists Syndicate—49.
Amer. Home Prod. Corp.—30, 262, 374, 464.
Amer. Hyalsol Co.—476.
Amer. Manufs. Toilet Articles—278, 361, 449, 450, 454.
Amer. Pharm. Assoc.—57, 250, 564.
Amer. Pharm. Co.—577.
Amer. Pharm. Corp.—164.
Amer. Pharm. Manufs.' Assoc.—59, 361, 452, 561.
Amer. Potash & Chem. Co.—368.
Amer. Products Co.—61, 252, 348, 578.
Amer. Solv. & Chem. Corp.—262, 586.
Amer. Tube & Cap Corp.—476.
Amer. Tung Oil Prod. Corp.—294.
Amico Labs.—294.
Aminoalcohols—589.
Aminoalkoxy Antiseptics—80.
Amolin—229.
Ampuls—64.
Anaesthalgin—482.
Anaesthetics—188, 391.
Anchor Cap & Closure Corp.—164, 178, 252, 262, 478, 572.
Anderson, John F.—48, 449, 456.
Anderson, Percy E.—48.
Angier Chem. Co.—260.
Angostura—184.
Animal Extracts—589.
Anise Oil—69, 182, 272, 399, 466, 582; Star, 184.
Anthony & Joseph—352.
Antifuma Mouth Wash—482.
Antimony—389.
Antiseptics—80, 189, 260, 389, 391, 486; Oral, 328; Meaning of (Edit.)—216.
Annette's Perf. Cleanser Co.—252.
Anti-Cept Co.—572.
Appleton, Thos. H.—376.
Arabic Gum—75, 266, 474, 584.
Arctic Chem. & Comb. Eng. Corp.—64.
Arden, Elizabeth—112, 170, 219.
Arex Prod. Co.—256.
Argol Chem. Corp.—366.
Arizona Labs.—570.
Arli Corp.—176.
Armand Co.—374.
ARMSTRONG, A. D.—"Essential Oils Prices," —33, 249, 456.
Armstrong Cork Co.—49, 262, 374, 420, 568.
Arner Co.—561.
Arnao Co., Chas.—49.
Arnica Flowers—184, 272.
Aromatics, New—128, 189.
Aromel Corp.—570.
Arotran—482.
Arren Prod. Co.—377.
Arrowroot—77.
Arsenobenzene—388, 484.
Arsinic Acid—284, 388, 588, 589, 591.
Art Tube Co.—368.
Ascaridol—116.
Assoc. Chain Drug Stores—172.
Athelene Chem. Corp.—294.
Atkinson, Norman G.—161.
AUGUSTIN, JOS.—"Oral Antiseptics"—515.
Auto. Paper Mach. Co.—368.
Avery, A. B.—568.
Ayars, J. G.—246.
Ayer, Inc., Harriet Hubbard—55, 137, 458, 576.

Bacharach, Lester—294.
Bacteria-Proof Packing—486.
Bactericides—81, 389.
Bailey, Clarence D.—249.
Bakelite Corp.—234, 548.
Baker Chem. Co. J. T.—376, 478.
Baker & Co., S. F.—254.
Bakst, A.—174.
Barbituric Acid—80, 82, 188, 390, 589.
Barnes, A. K.—161.
Barr, C. L.—448.
Barrows, F. W.—578.
Bath Salts—389, 444, 526.
Bathdora—229.
Baxter, Inc.-Don—460.
Bay Oil—399.
Bayer, G.—174.
Bayonne Cosmetic Shop—476.
Bean, W. L.—162.
Beaumont, G.—456.
Beautician Supply Co.—456.
Beecham's Lab.—250.
Beeswax—160, 386.
Beiser Co., E. T.—250.
Belladonna—590.
Belmonte, W. C.—377.
Belsterling, J. F.—174.
Bement, A.—235.
Benedict, L.—578.
Bengor Supply Co.—294.
Benzyl Morphine—589.
Bergamot Oil—69, 182, 272, 384.
Berk & Co., F. W.—53.
Bertram, H. H.—249, 362, 449.
Berwyn Pharm. Corp.—476.
Betaine Hydrochloride—484.
Biasetti Imp. Co.—294.
Bidetal—482.
Bills, C. E.—48.
Birch Tar—526.
Bird, O. D.—391.
Bischoff Co., Ernst—49.
Bismuth Salts—178, 189, 265, 285, 287, 378, 465; Tartrate—390.
Black Rose Co.—294.
Blair, Frank—249, 562.
Blatt, Armand V.—568.
Bleachine Mfg. Corp.—476.
Bliss, A. R.—390.
Bliss Co., Inc., A. R.—158.
Block Drug Co.—460.
Blood Preparations—487, 588.
Blue Bird Lotion—226.
Body Powders—556.
Bogart, M. T.—162.
Bois de Rose—184, 584.
Boncilla, Inc.—53, 145, 254.
Bond Mfg. Corp.—420.
Bonkura Prod. Co.—260.
Borax—378.
Borax Consol., Ltd.—376.
Bornyl Esters—284, 485.
Botanical Quality, by STONEBACK, W. J.—424.
Bottle Closure—388.
Bottle Pressures, Citrate, by SODERGREEN, A. L.—122.
Bottles, Stock, and Beauty—337.
Bottlers Mach. Co.—158, 161, 276.
Bourjois, Inc.—376.
Bower, E. R.—162.
BOYD, LINN J., "Varying Drug Effects"—217.
Boyer, D. L.—162.
Boylston, A. C.—449.
Brady, J. C.—480.
Breese, Murray—170.
Brewer, W. T.—47.
Brewster, R. C.—364.
Briasco, G.—48.
Bridges, Neumer & Co.—464.
Bristol, Lee H.—161, 456, 566.
Broderick, L. H.—464.
Bromund Co., E. A.—460.
Brooks, J. B.—480.
Brown, Anderson & Loeb—460.
Brown, H. B.—45.
Broza Prod. Corp.—176.
Bruce's Juices, Inc.—164.
Bucher, C. S.—391.
Buchu Leaves—474.
Buedingen, W. John—77.
Buermann Labs.—64.
Building Packages, by CHILSON, FRANCIS—228.
Bunting, G. A.—109.
Burchard, C. D.—294.
Bureau Feminine Hygiene—162.
Burroughs Wellcome & Co.—166.
Burrows, H.—250.
Burt Co., F. N.—254.
Bush & Co., W. J.—48, 464, 570.
Bushfield Labs.—568.
Butler Labs., Jean Wallace—61.
Button Corp., Geo. W.—338.
Bye, Herbert—566.
Byr-Zim Co.—64.

C. & C. Drug Co.—294.
Cactus Remedy Co.—480.
Calcium Gluconate—265, 285, 378, 486; Lactate—484.
Calco Chem. Co.—258, 370, 561.
Calif. Cosmetic Manufs Assoc.—59.
Calif. Pharm. Laws—374.
Calsodent Co.—258.
Camp, G. Lee—456.
Camphene—189.
Campho-Phenique Co.—258.
Camphor—67, 177, 265, 378, 466, 487; Monobromate—386; Oil—582.
Can Closure—388.
Canaday, W. D.—564.
Cananga Oil—474.
Cannon, H. J.—391.
Cantharides—270, 466.
Cantharidin—190.
Cap, Capitalizing the—536.
Capper-Kelly Bill—168.
Capudine Chem. Co.—260.
Caraway Oil—186, 399.
Carbide & Carbon Chem. Corp.—462.
Carbinols—128, 388.
Carbohydrates—285.
Carbonic Gas Co.—294
Carbyte Corp.—64.
Carel Labs.—53.
Cargille, R. P.—246, 372.
Carnauba Wax—75, 268, 399, 584.
Carotene—190, 486.
Carr-Lowry Glass Co.—464.
Carton, Shipping, Dressing the, by HOWELL, W. F.—545.
Carton, Use of the—430.
Cassia Fistula—487.
Cassia Oil—272, 474.
Castile Soap—458.
Castor Oil—386, 391.
Castoreum Tinctures—528.
Casumen—482.
Cedarleaf Oil—184, 399, 470, 584.
Cedarwood Oil—399, 582.
Celery Seed—184.
Celluloid Container—134.
Century Chem. Prod. Co.—572.
Chain Store Facts—460.
CHALEYER, P. H., Perfuming Shampoos—120; Perfuming Creams—322; Prolific Citronella—522, 128, 276.
Chamberlain Labs.—476.
Chamberlin, D. S.—252.
Chamomile Flowers—75, 178, 266, 472, 586.
Chanel—540.
Chaplin, W. L.—162.
Chappel Bros.—462, 572.
Charles of the Ritz—229, 366, 420.
Charm Prod., Inc.—476.
Charm-U Co. Inc.—570.
Chaulmoogric Acid—589.
Chemicolloid Labs.—552.
Chemists Club—59.
Chesebrough Mfg. Co.—262, 376.
Chicago Drug Assoc.—364, 454.
Chicago Perf. Assoc.—59.
Chilcott, J. C.—456.
CHILSON, FRANCIS, Tablet Making—39; Powder Packages—133; Building Packagees—228; Face Powder Manufacturing—439.
Chloral—287, 589.
Cholesterin—233, 285, 328, 526.
Cholin Roche—482.
Church & Dwight, Inc.—372.
Cibetone—286.
Cinchona Bark—266, 380.
Cincinnati Soap Co.—166.
Cineol—284.
Circle X, Inc.—570.
Citral—328.
Citronella Oil—73, 186, 384, 466, 522
Citric Acid—65, 265, 378, 580.
Citrus Oils—69, 390, 586.
Civet—326, 474.
Cleaner Chem. Co—476.
Clinadol Co.—53.
Clinical Labs. Co.—460.
Clough, S. DeWitt—249, 456.
Clove Oil—69, 384, 466.
Clow's Cosmetic Co.—476.
Cobb, G. W.—568.
Coblentz, V.—578.
Cocaine—286.
Cochrane, W. F.—63.
Cocoa Butter—244.
Cod Liver Oil—67, 177, 266, 380, 391, 466, 484.
Codein Drugs—484.
Coffo Mfg. Co.—64.
Cold Cream—444.
Cold Preparation—591.
Colgate-Palmolive-Peet—111, 262, 368, 377.
Collapsible Tubes—80, 284, 388.
Collegiate Perfumeries—260.
Colonial Dames Co.—49, 366.
Color in Package Design, by SCHAEDLER, E. A.—333.
Colton Co., Arthur—458.
Columbia Univ. Col. of Pharm—576.
Colwell Pharm. Corp.—166.
Co-Mag-Ol Labs.—476.
Commercial Solvents Corp.—55, 262, 478.
Compagnie Parento—372, 570.
Compagnie Re-Naitre—462.
Conditional Releases—57.
Congo. Prod. Co.—377.
Conklin, Myra N.—568.
Consolidated Safety Pin Co.—146.
Container Corp.—256.
Conti Castile Soap—294.
Convention Observations (Edit.)—108.
Convention Time (Edit.)—309.
COOK, CLAYTON M., Blond Psyllium—517.
Copeland Bill—426.
Cordry, M. E.—55.
Coriander Seed—474.
Corluten—482.
Corn Prod. Refin. Co.—235.
Cosmetic Tax, The—312, 576.
Cosmetic Therapy, by THIEME, A.—316.

Cosmetics—81, 128, 188, 389, 444, 485, 519, 528, 556.
Cosmetics Affiliated, Inc.—51.
Coty, Francois—456.
Coty, Inc.—111, 164, 166, 254, 376, 458.
Coumarin—178.
Coupey Fils—51.
Cox, W. Gordon—456.
Co-zymase—589.
Crane, C. K.—174.
Cream of Tartar—177, 465.
Creams—328, 444, 526, 556, 589; Making—237; Perfuming—238, 322.
Creo-Chem. Distrib. Co.—572.
Croton Oil—69, 272, 399.
Crowley, C. E.—370.
Crown Cork & Seal Co.—264, 478, 574.
Crown Drug Stores, Inc.—61.
Croxon—176.
Crude Drug Importers, Inc.—250.
Crystal Corp.—252, 366, 476.
Cullen, F. J.—25.
Curae Cream—482.
Curtis, Louise—538.
Curtis Pharm. Co.—572.
Cutex Hand Cream—226.
Cutter Lab.—166, 370, 462.
Cyclic Acids—285.

Danchig, R.—377.
Danco, G. J.—364.
Danco, L.—47.
Dandelion Root—69.
Dandrfall Corp.—568.
Dandruff Preparations—444.
Daniel, C. D.—63.
"Dasco" Shaving Cream—464.
Davidson, J. G.—162.
Davis, C. H.—250.
Davis, C. K.—366.
Davis & Geck, Inc.—18, 110.
Davis Medical Co.—176.
Davis, R. H.—249.
Davol, C. J.—566.
Dawn Superbe Co.—476.
Dazet Preparations—482.
Dedrick, A. J.—161.
Deeny, J. J.—160.
Degypt, M.—64.
deHoyos, L.—456.
De Laire—128.
DELGADO, FRANK A., "Prescription Economics"—510.
Demarest, F. G.—48.
de Markoff, M.—568.
Dene Prod. Corp., Jane—476.
Dennison Bros.—377.
Dentoza Labs.—61.
Dentinol & Pyrozide Co.—462.
Deodorant—80.
de Paris, Antoine—568.
Depilatories—189, 444.
Dermacxine Labs.—476.
Dermay Labs.—476.
Derosa Bros.—294.
d'Escayrac, B.—568.
Descollonges Freres—128.
Detail Men, by PHIBBS, HARRY C.—113.
Dewey, C. S.—162.
Dichloramine—484.
Dickinson, E. E.—162.
Digitalis—67, 287, 591.
Dirr, P. A.—566.
Disinfectants—391, 484.
Displays—552.
Distribution, Shifting—111, 168.
Dodge & Olcott Co.—256.
Dodge, F. D.—390.
Dodge, Lillian S.—137.
Doho Chem. Corp.—294.
Doolittle, Addington—162.
Doraldina, Inc.—372.
Dorland, R. E.—456.
Dorn, C.—64.
D'Orsay Perf. Corp.—53, 456.
Douglas, R. C.—252.
Dow Chem. Co.—174, 284.
Dowd, J.—254.
Dow Drug Co.—170.
Dreyer, Inc., P. R.—168.
Drisox Chem. Co.—338.
Drucker Co., A. E.—61.
Drug Repres. Assoc. of St. Louis—174.
Drug & Chem. Section, N. Y. B. of T.—57, 59, 172, 249, 574.
Drug Dinner, The (Edit.)—109.
Drug Distribution—111, 168.
Drug Effects by BOYD, LINN J.—217.
Drug Imports—460, 472.
Drug, Inc.—30, 174, 264, 478, 568, 578.
Drug Products Co.—476.
Drug Realty Corp.—476.
Drug Salesmen's Assoc.—564.
Drug Store Survey—362, 416, 423.
Drug Trade Bureau of Public Information—59.
Drug Trade in Depression-29.
Drug Treatment Cost—314.
Drugkraft—64.
Drugs, Essential Oil Content—82.
Drugs, Import Releases—460.
Drugs, Injection—588.
Druggists Supply Corp.—49.
Dunn, Chas. Wesley—19, 48, 361, 426.
Dunn, F. J.—252.
Dunning, H. A. B.—456.
Dunphy, J. H.—48.
Du Pont de Nemours & Co., E. I.—161, 166.
Du Pont, Justin—128.
Duties, Re-export—577.
Duvet, Leon—366, 544.
Dyana Chemicals—64.
Dyes, Hair—284.

Earle, Marie—344.
East Rutherford Syringes, Inc.—476.
Eastern Chem. Co.—51.
Eastman Kodak Co.—144.
Eaton, M.—249.
Eau de Cologne—526.
Eberle, E. G.—566.
Edco—226.
Eddy, Clyde—170.
Edros Nat. Prod., Inc.—61, 377.
Edwards, F. J.—47, 161.
EICHBERG, JOS. "Lecithin"—427.
Einson-Freeman Co.—234, 566.
ECKMAN, E., Quartz Lamp and Essential Oils—240.
Elgin Mfg. Co.—77.
Elm Bark—476.
Elmo, Inc.—516.
Elmore, G. O.—174.
Embossing Co.—164.
Emerson Drug Co.—61, 264.
Emkins Co.—476.
Emmett, A. D.—391.
Empire Metal Cap Co.—370.
Empress Mfg. Co.—234.
Emulsions, Preparing—485.
Endo-Zime Corp.—64.
Ephedra—77, 184, 584.
Ephedrin—589.
Epinephrin—590;—like drugs—589.
Erbacher, F. H.—262.
Ergosterine—388, 486.
Ergot—77, 184, 270, 577, 590.
Ermold Co., Edward—554.
Espy Corp.—53.
Essential Oil Assoc.—174.
Essential Oils—80, 128, 272, 328, 470, 584, 590; Germicidal—286; Phytosynthesis—286; Production—69; Prices, by ARMSTRONG, A. D., —33; Purification—285; and Quartz Lamp, by Ekman, E. and Samyschlayews, A.—240.
Esters, Bornyl—189, 388.
Eternal Youth Mouth Wash—226.
Ether—80, 487.
Etman, L. D.—48.
Eton Products—476.
Etrates—286.
Eucalyptol—178.
Eucalyptus Oil—73, 184, 384, 476, 582.
Eugene, Ltd.—540.
Evans, R. L.—345.
Ex-Cel-Cis Products Co.—256.
Expello Corp.—53.
Ey-Teb, Inc.—260.

Factor & Co., Max—370.
Fed Cosmetic Corp.—377.
Fair Trading (Edit.)—308.
Farrell, H. W.—162.
Federal Trade Commission—57, 576.
Federal Wholesale Drug Assoc.—462, 564.
Fe-Gene Co.—568.
Feminine Products—176.
Fenchone—484.
Ferguson Co., J. L.—348.
Fesler, Inc., Geo. C. V.—372.
Filler Machine Co.—278.
Fineural Tablets—482.
First Texas Chem. Mfg. Co.—49.
Fischelis, R. P.—426.
Fischman Soda Supply co.—294.
Fish-Schurman Corp.—574.
Fitch Co., F. W.—61.
Fitzsimmons, C. J. A.—249.
Flavoring Ext. Manufs. Assoc.—260, 564.
Flavor Prod. Co.—64.
Fleischmann Co.—55.
FLETT, R. L., "Zanol's Progress"—310; "Watching the Stocks,—513, 348.
Foral Aromatics—128.
Florasynth Labs.—460, 568.
Florida Citrus Oils Corp.—164.
Fomos Labs.—476.
Fontannaz, F. L.—366.
Food and Drug Administration—57, 577.
Foot Preparation—528.
Forbing, J. W.—63.
Ford Drug Co.—572.
FORD, K. L. Packaging in Glass—154, 248, 346, 426.
Foreign Medicinals—482.
Foreign Sales—377.
Foreign Trade (Edit.)—108.
Formaldehyde—191, 287.
Foster-Forbes Glass Co.—338.
Foster, Howell—250.
Fougera & Co., E.—61.
Frailey, Carson P.—249, 361.
Frank, Edward F.—456.
Frascati, A. T.—370.
Fraser, S. W.—57, 174, 452, 561.
Free List, Taxing the—115.
Fritzsche Bros.—460.
Frostilla Co.—340.
Fudo-Psyllium Corp.—176, 344.
Fulkerson Cosmetic Co.—574.
Fuller, Ralph L.—260.
Funk, R. S.—391.

Galbanum Gum—584.
Gallaher Drug Co.—61.
Gamble-Chem. Co.—294.
Gane & Ingram Inc.—166, 230, 254, 540.
Gardner, J.—242.
Garside, E.—391.
Gastro-Sil—482.
General Felt Products Co.—370.
General Pharmaceutical, Inc.—476.
General Plastics, Inc.—234.
General Western Factors—480.
Gentian Root—386.
Gephart, F. C.—538.
Geranium Oil—73, 186, 272, 384, 470, 584.
Gerardine Corp.—152, 472, 538.
Germicides—189.
Geyer, B. M.—278.
Gibraltar Corrugated Paper Co.—256.
Gilliland Labs.—258, 462.
Gilluley, J. H.—176.
Ginger Oil—399.
Ginseng—270.
Givaudan-Delawanna, Inc.—128, 164, 368, 370, 372.
Givaudan, Xavier—566.
Glandular Extracts—484.
Glass, Colored, by LESTER, W. R.—143.
Glass Container Assoc.—564.
Glass Durability, by LESTER, W. R.—221.
Glass Stopper, Ground—340.
Glassine Wrapper, The—543.
Glen Drug Stores, Inc.—176.
Gluconic Acid—588.
Glucoside, Cardiac-Active—285.
Glutamic Acid—391.
Glycerine—67, 177, 386, 466.
Glycidic Acid—487.
Glyphenarsine—82.
Goat Co., Fred—160.
Godefroy Mfg. Co.—256, 544.
Gogarty, B. J.—172.
GOLDEN, ASHER, Use Before Beauty—148.
Golden Co.—148.
Golden Eagle Beverage Co.—377.
Golden Peacock Co.—572.
Golden Seal Root—75, 184, 586.
Goldschmidt Corp., Th.—158, 464.
Gomina Argentine, Ltd.—568.
Gonda, F. D.—456.
Gordon Gordon, Ltd.—550, 572.
Gould, Barbara—550.
Gray, Dorothy—170, 219.
Greilsamer, R.—252.
Greeff & Co., R. W.—570.
Green, W. H.—464.
Grip, Inc.—476.
Groville Sales Corp.—570.
Guaicol Preparations—590.
Guerlain, Inc.—568.
Gulick, C. P.—250.
Gutmann & Co., Ferdinand—83.
Guy, W. W.—377.

Hagenow, T. F.—578.
Haggerty, Douglas—236.
Hair Preparations—80, 81, 82, 284, 285, 391, 485, 526, 556.
Halibut Liver Oil—391.
Hancock, E. J.—578.
Hand Cosmetics—519, 589.
Hand Medicine Co.—168.
Handling Costs, by NITARDY, F. W.—436.
Haney Drug Co.—170.
Hanover Chemists—476.
Hardenbergh, L. R.—63.
Harker, H. M.—366.
Harrah Labs.—372.
Harris, C. P.—252.
Harrison, F. M.—578.
Harrison Refining Co.—550.
Hart Glass Mfg. Co.—570.
Hausmann Pharmacy—170.
Hayden, F.—260.
Haynes, D. O.—578.
Haynes, Inc., Barbara—574.
Head, F.—47.
Health Beverages Co.—294.
Hearn, J.—170.
Heck-Conrad Co.—260.
Heger Products Co.—372.
Heilsen—242.
Helaine Labs., Princess—574.
Helena Hair Preparations—372.
Helmer, F. T.—456.
Helpin—242.
Hemorrhoid Preparation—191.
Henbane—590.
Henna—328, 472.
Hennafoam Corp.—377.
Henning & Son, H. W.—168.
Hensel Mfg. Co., S. T.-448.
Hercules Powder Co.—462.
Hermance's Med. Co.—577.
Herpicide Co.—476.
Hessler, E.—57.
Hewitt Bros. Soap Co.—570.
Hewitt Labs., Inc.—372, 464.
Heyden Chem. Corp.—376.
Heyl, F. W.—390.
Hieger, I.—250.
Higgins, J. F.—166.
Hinde & Dauch—458.
Hinds Co., A. S.—242.
Hinze Ambrosia—236, 574.
Hippulin—476.
Hlad, F. P.—252.
Hoffman, C. F.—260.
Hoffmann-La Roche, Inc.—462.
Hogstad, Anton—48.
HOLMES, A. D., Vitamin Assay—437.
Home Store Products Co.—294.
Hompe, R. W.—348.
Hopkins & Co., J. L.—372.
Hormone Preparations—81, 188, 284, 588; in Cosmetics—244.

Horse Oil—244.
Horte Chem. Co.—570.
Houbigant, Inc.—480.
Houchens, J. H.—578.
Howe, Russell—47.
Howell Co.—462.
HOWELL, W. F., Dressing the Shipping Carton—545.
Hubbel Products Corp.—168.
Hudnut, Inc., Richard—229, 235, 550.
Hughes, Inc., E. Griffith—55, 374.
Huisking, Charles L.—454.
Huisking, Joseph—249.
Hummel Chem. Co.—294.
Hurlburt, E. B.—362, 449.
Humphrey, L. D.—562.
Hyacinth Oil—128, 276.
Hydrargyrum Salicylicum—286.
Hydrogen Peroxide—589.
Hyman & Hyman—372.
Hypnotic Action—391.

Ideal Labs.—377.
Immerfroh Tablets—482.
Immunities Labs.—53.
In the Right Direction (Edit.)—16.
Increased Activity (Edit.)—415.
Independent Druggists Alliance—366.
Industrial Chem. Sales Co.—372.
Inecto, Inc.—229, 345.
Insecticide & Disinfectant Mfrs. Assoc.—454, 564.
Inst. of Chemists—562.
Inst. of Medicine Mfrs.—476.
Insulin—64, 486.
International Germicide Co.—377.
International Research Corp.—64.
Intravenous Prod. Co.—462.
Iodent Co.—458.
Iodine—67, 80, 188, 223, 268, 388, 466.
Iodine Educ. Bureau—254, 462.
I-O-Dine Labs.—258.
Iodine, Tincture—287, 486.
Iodized Oils—287, 487.
Ipecac Root—184, 268, 399, 486, 586.
Ipecacuanha—286.
Iris Root—487.
Iron Ammonium Citrate—293.
Isatin—486.
Isopropyl Alcohol—433.

Jaborg Beauty Culture—476.
James, L.—249.
Jamieson & Co., C. E.—572.
Japan Wax—270, 528.
Jergens Co., Andrew—246, 350.
Jeunesse d'Or, Inc.—294.
Jurell, Maison—166.
Joans Beauty Shop—294.
Jofre, Inc.—476.
Johnson Co.—256.
Johnson & Johnson—61, 235.
Johnson, J. W.—564.
Joncaire, Inc., A.—168.
Jones, J. C.—162.
Jones, Quell—570.
Jo-Ri Sales—377.
Joy-Synth Co.—256.
Jundt, Chas.—366.
Juniper Oil—384.

K. C. N. Products Co—294.
Kaltman & Co., D.—49.
Kamala—77, 194, 474.
Karaya Gum—386, 474.
Katexon Foil—482.
Katobesol—482.
Katolox Labs.—294, 377.
Katz Drug Co.—264.
Keasbey, H. G.—578.
Keeler, F.—170.
Keim, R. D.—249.
Keller, D. C.—48.
Kelly, R. C.—162.
Kempton, J. B.—262.
Kennaway, E. L.—250.
Keratin—588.
Kerfoot & Co., Thos.—577.
Kerrigan, J. J.—249, 566.
Keyser, F. W.—456.
Kiefer, Karl—246.
Kiefer Machine Co., Karl—276.
Kilheffer, E. H.—161.
Killing Progress (Edit.)—508.
Kimberly-Clark Corp.—264, 478.
Kimm-Libbey, Ltd.—570.
King, E. L.—564.
Kingstone, L. H.—176.
Kingsway Prod., Inc.—164.
Ki-Urna—377.
Klein, H.—51.
Klein & Co., Inc. M.—49.
Knight, J. M.—366.
Kobbe Labs.—166.
Koenig, H. D.—161.
Kolar Labs.—458, 566.
Kolb, P. V.—162.
Kolynos Co.—168.
Konjola, Inc.—49, 64.
Kotex Co.—464.
Kramer, J. L.—377.
Kremers, E.—242.

Label Personality—225.
Labeling, Difficult—141.
Labels, Transparent—352.
Lactic Acid—81, 380.
Lactones—588, 389.
Lady Slipper Root—472.
La-Gay Cosmetic Co.—476.
Laird Co., R. H.—256.
Lakro Co.—372.
Lamb, A. B.—48.
Lambert, A. W.—480.
Lambert-Fesler, Inc.—476.
Lambert, Inc., Marion—476, 540.
Lambert Pharmacal Co.—49, 79, 111, 264, 478, 572, 578.
Landesman, K. C.—456.
Lane Drug Stores—170.
Langreck, F. B.—366.
Lanolin—244, 588.
Lanzette Labs.—372.
Laray Cosmetics, Inc.—176.
Lard—244.
Lasine, La—225.
Latin Names—25.
Lavender Oil—186, 470.
Lavoris Chem. Co.—260, 377.
La Wall, C. H.—456.
Lawrence, J.—158.
Leather Vita—229.
Lecithin, by EICHBERG, JOS.—427, 444, 591.
Lederle Labs.—166, 258, 462, 572.
Lee Co., Martha—476.
Lee & Co., W. W.—577.
Legislation, Drug—55.
Lehmann Co., J. M.—156.
Lehn & Fink, Inc.—79, 242, 260, 264, 478, 578.
Leman & Gerber—460.
Lemon Oil—182, 272.
Lemon Terpene—328.
Lemongrass Oil—191, 328.
Lentheric, Inc.—55.
Leo & Co., D. C.—170.
Leonhardt, F. H.—249.
LESTER, W. R., Colored Glass—143; Glass Durability—221.
Lever Bros. Co.—168.
Levy, B. E.—568.
Lewis, J. C.—256.
Liberty Pharm. Corp.—294.
Liggett Co., L. K.—577.
Lightfoot, C. L.—364.
Lilly, Eli & Co.—161, 258, 340, 420, 572.
Lilly, J. K.—456.
Lime Compounds—487.
Lime Oil—69, 182, 272, 399, 470, 582.
Linaloe Oil—470.
Lincoln Drug Co.—176.
Lincoln, Janie—343.
Lind Beauty Prep.—377.
Lipsticks—446, 528.
Little Knowledge, A, (Edit.)—15.
Liver Extract—80.
Lobenberg, A. L.—368.
L'Onglex—377.
Louangel Corp.—570.
Leuders & Co., George—51.
Luizym—482.
Lund, R. L.—48.
Lycopodium—268.
Lyman, F. W.—63.
Lynch, F. J.—362, 509.
Lynn, C. J.—161.
Lyon, J. B.—550.
Lyon, W. S.—63.

M. A. V. Cosmetics Mfg. Co.—368.
MacDonald, Z. A.—126.
Mackintosh, C. A.—48.
Macy & Co., R. H.—170, 219.
Magnus, J. B.—174.
Magnus, Mabee & Reynard, Inc.—48, 256.
Magnus, P. C.—174, 249.
Maid Drug Co.—568.
Maison Juerette, Inc.—294.
Majestic Metal Specialties, Inc.—168.
Mallinckrodt Chem. Works—139.
Malone, E. S.—377.
Malva Flowers—75, 270, 399, 472.
Mann, E. W.—566.
Manna—386.
Mannheimer, J.—174, 372.
Marjoram—75, 476.
Marohn, I. E.—364.
Martin Liniment Co.—164.
Martin, W. E.—568.
Marvel Prod. Co.—126.
Maryland Glass Corp.—143, 221.
Mastic Gum—77, 270, 474, 586.
Matchabelli Perf. Corp.—570.
Mathieu & Co., A. H.—476.
Mathieson, H. C.—568.
Matzyme Prod. Corp.—254.
Mayflower Drug Stores—476.
McCollum, E. V.—51.
McCormick & Co.—577.
McCullough Labs.—548.
McDonald, F. G.—48.
McDonough, F. J.—174, 249.
McHugh, T. J.—480.
McIlvaine Bros.—480.
McIntosh, Inc.—476.
McKallor Drug Co., E. C.—51.
McKeesport Mfg. Chem.—377.
McKesson-Doster-Northington, Inc.—49.
McKesson & Robbins, Inc.—53, 55, 79, 174, 254, 264, 366, 372, 374, 376, 454, 458, 572.
McManus, V. P.—168.
McNeil Labs.—460.
Mead, Johnson & Co.—48, 61, 264.
Means, E.—170.
Medical Care, (Edit.)—308.
Medical Prod. Lab.—176.
Medicinal Chem.—390.
Medicinal Preparations—128, 188, 484, 485.
Medicinal Prod. Co.—476.
Mediment—482.
Meed Co.—256, 464.
Mehron Cosmetics Co.—252.
Meht & Daniel—372.
Melatol Labs.—294.
Melosar—482.
Mennen, Wm.—48.
Menthol—67, 177, 268, 284, 380, 465, 556; Synthetic—188, 386.
Mentholatum Co.—51, 176.
Menthone—589.
Merck & Co.—366, 376, 572.
Mercurials—178, 378, 465, 580; New—82.
Mercury—65, 178, 191, 265, 378, 465; Ointment—287.
Merrell Co., Wm. S.—53, 338, 572.
Merrill, R. F.—246, 350.
Metal Litho Corp.—368.
Metal Package Corp.—146.
Metals, Determining—390.
Metcalf, E. B.—368.
Methyl Salicylate—80.
Metro Prod. Co.—372.
Metz Labs., Inc., H. A.—55, 164.
Midway Chem. Co.—51.
Miles, H.—578.
Miles Medicine Co.—344, 370, 566, 574.
Miller Owens Corp.—294.
Mills, A.—310.
Milnesia Intern., Inc.—254.
Milou, Marius—566.
Milson Co.—462.
Mimosa, French—27.
Minehart, J. R.—578.
Mineral Oil—67, 115, 380, 466.
Mineral Oil and Tariff (Edit.)—308.
Mistol—229.
Modern Health Prod., Inc.—294.
Modern Note, A—137.
Modern Prod., Inc.—462.
Monochloramine—588.
Monsanto Chem. Works—164, 254, 264, 364, 366, 478, 570.
Morgan & Co., Clarence—51, 572.
Morphine—81, 191, 487.
Morris, F. B.—366.
Morrison, R. W.—390.
Mosquito Powder—485.
Mosso Labs., C. A.—61.
Mulster, D. J.—362, 452.
Mundet & Son, L.—164.
Mudge, A. W.—456.
Muhlens, Inc., Ferd.—460.
Muir Co.—460.
Musk—326, 485.
Mustard Oil—69.
Myrurgia—548.
Mystic Cream Co.—237.

Naef & Co., M.—128, 366, 480.
Namlak—476.
Namssorg & Associates—166.
Namy, L. C.—
Nat. Aniline & Chem. Co.—168.
Nat. Drug Co.—370, 462, 572.
Nat. Drug Store Survey—168.
Nat. Grocery Co.—170.
Nat. Guild Hy-Pure Druggists—170.
Nat. Oil Prod. Co.—61, 252, 458, 568.
Nat. Pharm. Lab. Corp.—176.
Nat. Pharm. Mfg. Co.—168, 256.
Nat. Tea Co.—514.
Nat. Toilet Co.—446, 476.
Nat. Wholesale Drug. Assoc.—59, 364, 454.
Natural Health Prod. Assoc.—260.
Natural Labs.—476.
Natural Soda Prod. Co.—294.
Nauheim Pharmacies, Inc.—170, 478, 538.
Nazare, Francois—566, 570.
Nealon, D. F.—446.
Nelson, Baker & Co.—456.
Nelson, E. H.—377.
NELSON, E. M., Vitamin Content—318.
Nelson, F. T.—456.
Nerol—128.
Nestor, J. J.—578.
Neurovis Tablets—482.
Neve, A. J.—458.
New Eng. Merchandisers, Inc.—254.
New Name, Our (Edit.)—108.
N. Y. Board of Trade—57, 59, 172, 249, 574.
N. Y. Quinine & Chem. Co.—294, 572.
Newcomb, E. L.—249.
Newcomb & Co., Inc., J. F.—176.
Newcomb, F. S.—578; Newlin, C. E.—364.
Nialoui Oil—276.
Nichols, J. J.—226.
Nielson, C.—391.
NITARDY, F. W., Handling Costs—436, 49.
Northwestern Drug Co.—252.
Norton, J. S.—162.
Norton Labs., Inc.—164.
Norwegian Cod Liver Oil Assoc.—170.
Norwich Pharm. Co.—61, 234, 260, 376, 377.
Novicaine—191.
Novocol Chem. Co.—370.
Noxacorn Co.—176.
Noxzema Chem. Co.—49, 61, 174.
Noyes, N. H.—161, 249, 361, 449.
Nusheen, Inc.—476.
Nutmeg—390.
Nux Vomica—270, 390.

Oak Moss Incture—528.
Oakland Food Products—258.
Obesity Research Bureau—64.
Ochsner, A.—391.
Od Peacock Sultan Co.—572.
Odol Products—476.

Ohio Advertising Statute—460.
Oleonaphtha—287.
Oleothesin Co.—64.
Only Human (Edit.)—307.
Opium Alkaloids—591.
Oral Antiseptics, by AUGUSTIN, JOSEPH—515.
Orange Oil—384.
Orbis Prod. Trading Co.—51, 284.
Oren, W. A.—47.
Organo-magnesium Compounds—128.
Organo-Therapeutic Preparations—82.
Orthohydroxybenzylamine-Arsinic Acids—188.
Orthophenylphenol—188.
Osterberg, A. E.—390.
Ovarial Substance—487.
Overhamm, W. J.—366.
Owens-Illinois Glass Co.—53, 55, 234, 370, 478.
Owens-Illinois Pac. Coast Co.—476, 570.
Owl Drug Co.—61, 254, 568.
Oxzyn Co.—572.

P. H. D. Products—176.
Pacific Coast Borax Co.—164.
Pacific Prod. Co.—64.
Package Award, Wolf—235.
Packages, Building, by FRANCIS CHILSON—228.
Packaging, Bacteria-proof—486.
Packaging Ethicals—533.
Packaging Exposition—172, 339.
Packaging Mistake, A—341.
Packaging, Price—219.
Packaging Trends—417.
Packer's Shampoo—229.
Palm, Fechteler & Co.—352.
Palmer, Carleton H.—249.
Palmer, Solon—476.
Papain—268, 391.
Pardee, J. T.—249.
Parfumeurs Parisiens—294.
Paris Labs. Co.—256.
Park & Tilford, Inc —227.
Parke, Davis & Co.—53, 61, 79, 174, 258, 264, 284, 462.
Parr, R. M.—391.
Part, A. F.—176.
Pastilles—285.
Patterson Engineering Corp.—51.
Patterson Foundry & Machine Co.—158.
Paula Labs.—377.
Peairs, W. A.—480.
Pearl Essence—552.
Pease, S. S.—260.
Peerless Labs.—294.
Peister Chem. Co.—476.
Penfield, F. C.—262.
Penick, S. B.—174, 249.
Penick & Co., S. B.—53, 64, 574.
Penn-Central Chem. Co.—176.
Pennsylvania Glass Prod. Co.—234.
Pennyroyal Oil—470.
Pentol Co.—294.
People's Drug Stores—376, 478.
Peppermint Oil—69, 182, 272, 470, 582.
Pepsodent Co.—59.
Peptone—590.
Perfex Chem. Co.—377.
Perfumes—81, 285, 485, 487.
Perfuming Creams, by PH. CHALEYER—322; 238.
Periero Bark—190.
Perillo, Jr., Carl—249.
Peroxide Mfg. & Sp. Co.—476.
Peroxotone Labs.—64.
Peru Balsam—69, 270, 591.
Petrolagar Co.—164.
Petropalm Corp.—260.
Pfaudler Co.—61, 158.
Pfeiffer, C. Leonard—235, 350.
Pfening Co., Fred D.—156.
Pfunder, Inc., F. H.—368.
Pharmaceuticals, New—388.
Pharmacy Laws, Calif.—374.
Phellodendron Japonicum Maxim Oil—276.
Phenol Alkyl Ethers—81.
Phenol Coefficient—390.
Phenolphthalein—81, 178.
Phenols, Alkylated—388.
Phenylsalicylic Acid—284.
PHIBBS, HARRY C., Detail Men—113.
Phila. College of Pharm.—260.
Phila. Drug Exchange—174, 564.
Philip, Bruce—170.
Philippe, Louis—570.
Phillips Chem. Co., Chas. H.—55, 372.
Phoenix-Hermetic Co.—138, 368, 370, 476, 574.
Physiologically Active Substances—188.
Picciano, D. E.—566.
Pierson, Romaine—480.
Pinaud—220, 230.
Pine Needle Oil—287, 474.
Pinene—285.
Pink Root—270, 474.
Plant Location—552.
Plaut, Edward—19.
Plough Chem. Co.—258.
Pneumatic Scale Corp.—158.
Polak Frutal Works—128.
Polak & Swartz—128, 373.
Pompeian Co.—61, 542.
Ponds Extract Co.—166, 538.
Pope, F. J.—59.
Popper & Klein—462.
Poppy Flowers—270.
Potassium Iodide—65.
Powder Compacts—328.
Powder Manufacturing, by FRANCIS CHILSON—439.
Powder Packages, by FRANCIS CHILSON—133.
Powder Pouch—176.
Powders Tablets—191.
Powders—556.
Pratt, J. L.—49.
Premier Labs., Inc.—377.
Prescription Economics, by FRANK A. DELGADO—510.
Price Cutting, Attacks on—19.
Price, Harriet—377.
Price Packaging—219.
Pricing, Unfair (Edit.)—16.
Prickitt, C. A.—174.
Primrose House—221, 372.
Princess Pat, Ltd.—49, 550.
Probo Labs.—548.
Profits and Sales (Edit.)—17.
Promonta—116.
Propanol Drugs—484.
Proprietary Assoc.—562.
Provident Chem. Works—162.
Psyllium, Blond, by CLAYTON M. COOK—517.
Psyllium Seed—75, 170, 178, 265, 386, 472, 582.
Publicker Alcohol & Chem. Sales Corp.—476.
Puritan Cosmetics, Inc.—246, 249, 366, 568.
Puritee Products.—294.
Pyrethrum Flowers—77, 268, 399, 476, 586.
Pyridium Co.—572.

Quaker Herb Gardens—176.
Quartz Lamp and Essential Oils—240.
Queeny, John F.—364.
Quinine—178, 188, 190; Iodobismuthate—590.
Quinlan, Kathleen Mary—335.
Quinolin—80; Benzoic-Carboxylic Acid—284.

R. A. S. Labs.—372.
R. P. C. Co.—49.
R. S. Prod. Corp.—294.
Radioactive Substances—556.
Radix Altheae—590.
Ragno, F.—364.
Raladam Co.—260.
Randolph, G. A.—63.
Rao, R.—48.
Raritan Pharm. Co.—377.
Raspberries—399, 472.
Ravenscroft, V.—456.
Ray Sales Co.—64.
Recamier Mfg. Co.—55.
Reciprocal Advertising, Inc.—260.
Reddish, G. F.—242, 390.
Red Hand Tea Co.—176.
Reddington & Co., F. B.—350, 448.
Reed & Carnrick—166, 256.
Re-export Duty—577.
Regulatory Work—23.
Reich-Ash, Inc.—230.
Reina, Lilla—176.
Rem—226, 229.
Remensnyder, J. P.—249.
Rem-Hay Labs.—372.
Renaud et Cie—372.
Rendigs, P. D.—47.
Renick, R. R.—48.
Renotrat—242.
Reporting Progress (Edit.)—107.
Re-Seal-It-Metal-Cap Corp.—134.
Research Continues (Edit.)—109.
Results or Principle? (Edit.)—16.
Retail Dept. Stores of America—170.
Retailer, The Valuable (Edit.)—508.
Rex-O-Lyn Co.—377.
Rex Perfumo—226.
Rex Prod. Corp.—176.
Reynolds Metals Co.—148.
Rhodehamel, H.—456.
Rhubarb Root—77, 184, 270, 472, 584.
Richert & Otte Co.—377.
Richmond, P. O.—176.
Richter, G. H.—390.
Ricinoleic Acid—390.
Rickel-Lane Corp —294.
Rider, T. H.—390, 391.
Riedel-de Haen—284, 370.
Riegel Textile Corp.—134.
Riggs, H. S.—252.
Rinseless Shampoo Corp.—377.
Ritchie & Co., Harold F.—372, 458.
Ritz Carlton Perfum. Corp.—166.
Robert—420.
Robinson Wagner Co.—294.
Rochelle Salt—466.
Rodriguez Co., J. H.—460.
Roessler & Hasslacher Chem. Co.—51, 372.
Roger & Gallet—229.
Rojane—294.
Rollins Co., F. E.—260.
Rose Oil—580.
Rose Petals—270.
Rosenfeld, A.—47.
Rosenfeld, Al—476.
Rosser Corp., Marion—176.
Ross, A. H.—161.
Rossville Alcohol & Chem. Corp.—586.
Rotenone Prod. Co.—476.
Rothschild, M. W.—564.
Rouge—189.
Royal Labs., Inc.—570.
Rubinstein, Helena—112, 376, 540.
Rueckert, E. E.—47.
Rumonog Co.—476.
Ru-No-Ma Co.—49.

S-200 Mfg.—260.
S. M. Labs.—61.
Saccharin Drugs—284.
Saffron—77, 472, 584.
St. Louis, Hope of (Edit.)—416.
St. Louis Survey—362, 416, 423.
Salco Sales Corp.—476.
Salesmen's Assn.—174, 454, 564.
Salicylic Acid—190, 556.
Salisbury, V. B.—278.
Same Problem, The (Edit.)—108.
SAMYSCHLAYEWS, A., Quartz Lamp & Essential Oils—240.
Sandalwood Oil—69.
Sandarac Gum—474.
Sandoz Chem. Works, Inc.—53.
Sanitary Supply Co.—294.
Santonin—177, 191, 268, 466, 580.
Sappenfield, R. G.—566.
Saunders, C.—170.
Savage, W. H.—578.
SCHAEDLER, EMIL A., Color in Package Design—333.
Schering Corp.—254, 372.
Schering & Glatz—577.
Schieffelin & Co.—252.
Schieffelin, John Jay—168.
Schwabacher & Co., S.—464.
Scott & Bowne—61, 374, 572.
Scott Co.—377.
Scott, E. W.—391.
Scovill Mfg. Co.—230, 376, 548.
Sealand Process Corp.—64.
Searle & Co., G. D.—168.
Searle, John G.—249, 361, 452, 561.
Sears, Roebuck & Co.—55.
Sebacic Acid—80.
Sefton Can Co.—368.
Seidlitz Mixture—265, 378, 466.
Select Drug Products—254, 572.
Selenium—391.
Seligman, E. R. A.—19.
Seneca Co.—64.
Senega Root—75, 474, 584.
Senna—184, 270.
Serums—389, 591.
Sesame Oil—444.
Seydel Chem. Co.—256.
Shampoos—117; Perfuming, by CHALEYER, Ph.—120.
Sharp & Dohme—250, 293, 370, 462, 478.
Sheehan, H. R.—48.
Sheer Pharm. Corp.—344.
Shelberg, E. F.—390.
Sheldon, H. H.—252.
Sheldon, Morse, Hutchins & Easton—254.
Sherka Chem. Co.—176, 254, 372.
Sherman Drug & Chem. Co.—176.
Sherman, G. H.—480.
Sherman, H. C.—391.
Sherwood Refining Co.—256.
Shonle, H. A.—390.
Shriner, R. L.—242.
Shu-Care—226.
Siegelman Labs.—61.
Silver Camphocarbonate—191.
Silver Nitrate—465.
Silver Import Co., Geo.—162, 252.
Silver Tannin Albumen—487.
Simon, G.—57, 249.
Simpkins, H. W.—249.
Simpson, C. T.—166.
Simpson, Inc.—166, 250, 368.
Skin, Care of—128.
Skin Cream—190, 556, 591.
Skin Culture Labs.—476.
Skin Preparations—328.
Skin-Wrapping Bottles—150.
Slendabalm—226.
Smart New Dress, In—542.
Smith, A. E.—162.
Smith, A. Homer—449.
Smith Bros., Inc.—61.
Smith, C. V.—262.
Smith, Carroll Dunham—260.
Smith, J. H.—480.
Smith, J. Van Velsor—162.
Smith, Kline & French Labs.—260.
Smythe, R. F.—366.
Snell, Foster Dee—166, 252, 256, 364.
Snow, R. K.—456.
Societe Prod. Chimiques—460.
SODERGREEN, A. L., Bottle Pressures—122.
Sodibor Labs.—462.
Sodium Iodobismuthite—256.
Sodium Perborate—444, 526.
Somers, A. S.—63.
Southern Drug Stores, Inc.—64.
Southwestern Quicksilver Co.—176.
Spearmint Oil—186, 293, 472, 582.
Speiden, C. L.—57, 174.
Spencer, G. C.—480.
Spike Oil—69, 184, 399.
Sprayer & Chem. Corp.—176.
Springfield Com. Alcohol Corp.—460.
Spruce Oil—582.
Squibb & Sons, E. R.—49, 53, 63, 166, 168, 258, 293, 294, 338, 370, 478.
Stahly Mfg. Co., W. A.—294.
Stanbury, R. B. J.—170.
Standard Brands, Inc.—55.
Standard Knapp Corp.—158.
Standard Prod. Co.—166.
Standard Textile Prod. Co.—77.
Sta-Set Mfg. Co.—176.
Stearic Acid—556.
Stearns & Co., Frederick—63, 250.
Stein & Co., A.—293, 478.
Sterile Compositions—591.
Sterilizing Process—591.
Sterling Soap & Chem. Co.—294.
Stern, R.—162.
Stewart, P. N.—47.
Stichweh, F.—174.
Stiefel, A. L. P.—260.

Stock, Watching the, by R. L. FLETT—513.
Stokes Machine Co., F. J.—160, 276, 448.
Stone, Evans—249.
STONEBACK, W. J., Botanical Quality—424.
Stramonium Leaves—75, 399.
Strong Cobb & Co.—348.
Strong, E. L.—174.
Strophanthidin—81.
Studio Cosmetic Co.—168, 370.
Stummer, J. L.—252.
Styrol—189.
Sulphur—391, 528.
Sulphur Baths—591.
Sun-A-Sured, Inc.—294.
Sunburn Preparations—526.
Swann Corp.—63.
Swann, Theodore—566.
Switzer, G.—134.
Sylvania Indust. Corp.—166.
Synergic Composition—588.
Synol Soap—229.
Syphilis Spirochetae, Antibodies Against—287.
Syrup Co., A. G.—64.
Syrup Densities—158.

Tabern, D. L.—390.
Tablet Making—39, 389, 588, 591.
Tacoma Drug Co.—368.
Ta-Go Labs.—294.
Taiwania Cedar Oil—276.
Tanna-Menthol Co.—252, 374.
Tansy Oil—470, 582.
Tanwel—377.
Tariff Juggling (Edit.)—108.
Tartaric Acid—67, 266, 465.
Tartar Emetic—466.
Taumasthman—242.
Tax, A Cute Little (Edit.)—309.
Tax Bill, The (Edit.)—508.
Taxilian Salves—116.
Teeter, A. A.—174, 249.
Ten Cent Beauty—227.
Tennessee Wholesale Drug Co.—456.
Terpin Hydrate—178.
Terpineols—486.
Terri Cosmetics Corp.—53, 344, 420, 568.
Testimonials, Paid—509.
Tetlow Co., Henry—260.
Theobromine—285.
Therapeutic Compounds—188, 189, 389, 484, 591
THIEME, E., Cosmetic Therapy—316.
Thiosinamine Solution—191.
Thompson, G. J.—390.
Thurston & Braidich—368.
Thymol—270, 284, 589.
Thyroid Preparation—285.
Tichenor Antiseptic Co.—260.
Tischer Corp.—53.
Tissue Creams—320.
Titanium Oxide—244.
Titus, V. W.—55.
Tobacco, Antiseptic—189.
Todhunter, E. N.—391.
Toilet Waters—328.
Tolu Balsam—270.
Tonka Bean—184, 270.
Toothpastes—81, 485, 528.
Toothpaste Container—188.
Towns & James—64, 252.
Toxicity of Drugs—390.
Trade Names List—59.
Tragacanth Gum—75, 266, 386, 474, 584.
Tremper, E. D.—174.
Triangle Package Mchy. Co.—158.
Tribromoalcohols—388.
Tribromo-Ethyl Alcohol—487.
Trichloroethylene—258, 286.
Trotula—110.
Tru-Lax Corp.—458.
Trypanocides—588.
Trypsin—391.
Tube Closure—80.
Tuberculin Preparations—589.
Tulon Products—176.
Tunica Labs.—476.
Tysdal, E. M.—166.

Ufuta Labs.—377.
Uhe, G.—252.
Ulmer Labs.—464.
Unfair Trading (Edit.)—215.
Ungerer & Co.—166, 366, 480, 570
Uniform Economy—343.
Union Sales Corp.—377.
Union Solvents Corp.—55.
United Drug Co.—55, 254, 576
United Medicine Manfrs.—364.
United Perfumers—176.
U. S. Advertising Corp.—258.
U. S. Industrial Alcohol Co.—293.
U. S. Standard Prod. Corp.—53.
Univ. Research Labs.—476.
Upjohn Co.—374.
Use Before Beauty, by ASHER GOLDEN—148.
Utility Packages—139.

Vadsco Sales Corp.—164, 372, 376, 460, 478, 564.
van Ameringen, A. L.—174.
Vandewater, I.—249.
Vanilla Beans—75, 186, 268, 399, 474, 580.
Vanillin—177, 284.
Van Raalte, J.—568.
Varona, Angela—260, 550.
Veal Fat—244.
Vel Co.—572.
Velogen, Inc.—61.
Velvetina Co.—372.
Veritas Prod. Co.—166.
Verley, Albert—128, 166.
Vermifuge—284.
Vick Chem. Co.—55, 176.
Vigo Labs.—176.
Vince Labs.—340.
Vitamin Assay, by A. D. HOLMES—437.
Vitamin Content by E. M. NELSON and REED WALKER—318.
Vitamins—35, 37, 81, 82, 190, 285, 286, 287, 388, 390, 391, 484, 486, 487, 528, 590, 591.
Vivinv Perfumers—570.
Von den Steinin, G.—63.

Wafer, J.—456.
Waldo, J. H.—390.
Walgreen, C. R.—574.
Walgreen Co.—478.
Walker Labs., E. B.—377.
WALKER, REED, Vitamin Content—318.
Wall Chemicals, Inc.—462.
Walton, R. P.—391.
Wands—294.
Warner, C. W.—452, 456, 562.
Warren Corp., Northam—51, 55, 230, 264, 576.
Wasey & Co., Erwin—61.
Wasserscheid, A. A.—249.
Waterbury Paper Box Co.—464.
Watkins Co., J. R.—370, 564.
Watkins Co., R. L.—476.
Watkins, Paul—63.
Wave Oils—276.
Webb, F. W.—161.
Weed, A.—48, 456.
Weeks, Carl—170, 249.
Wiecker, H.—57, 174.
Weinberger Drug Stores—63.
Weldona Corp.—61.
Wellcome, H. S.—47, 364.
W. Va. Alcohol Case—577.
Western Exterminators—176.
Western Medical Corp.—476.
Wetzel & Waldman—476.
Wheeler, J. H. H.—480.
Whelan Drug Co.—51.
Whelpley, M. G. B.—48.
White Cap Co.—160.
Wiedman, H. A.—161.
Willard Tablet Co.—476.
Willats, H. P.—366.
Williams, O. L.—161, 568.
Williams Sealing Corp.—160, 568.
Williams, V. E.—174, 249.
Wiltsee, Lee—456.
Wimmer, Curt—250.
Winthrop Chem. Co.—166, 284.
Wisc. Pharm. Assoc.—576.
Wise, E. C.—390.
Wiseman, W. H.—170.
Without Revision—18.
Withrow, W. G.—572.
Wolke, J. C.—47, 161
Woodbury, Inc., J. H.—226, 260.
Woodward, Alma—377.
Worcester Salt Co.—345, 568.
Wormseed Oil—293, 470, 584.
Wormwood Oil—69.
Worth English—476.
Wrench, J.—456.
Wyeth & Bro., John—256, 374, 570.

X-Pel Process Co.—464.
X-Ray Preparation—589.

Yeomans, A. H.—578.
Yohe, G. O.—364.
Young Bros., Inc.—48.
Young, Edw. J.—566.
Young, Everett F.—161.

Zanol Prod. Co.—146, 310.
Zanol's Progress, by R. L. FLETT—310.
Zenith Emulsifying Machine—158.
Zerkt Pharmacal Co.—53.
Zimmerman, M.—377.
Zonite Products Corp.—49, 164, 252, 464.
Zotos Vapets—345.

PATENTS

(*Continued from page 83*)

tracting hempseed above 57° C. with mixture of whey and lime water. Dr. Josef Sirek, Jince, Czechoslovakia. G. P. No. 546,371, filed November 14, 1928.

Soapless Shaving Creams

Product is made with aluminum hydrosilicate. This product may be used before application of soap to face or it may be made into finished shaving cream by addition of lather-producing substances, such as saponin, perfumes, etc. Hans Wernaer, Cali, Columbian Republic. G. P 517,357, filed February 17, 1928.

Making Eucalyptol

Two kilograms of Japanese camphor oil, density at 20° C., 0.869, and soluble in proportion of 31% by volume in 50% resorcinol solution, are cooled to —12° C. and allowed to mix with three kilograms of 60% sulphuric acid at same temperature. Camphor oil is allowed to flow into sulphuric acid drop by drop over during one hour with agitation. Mixture is agitated for another half hour and allowed to stand for four hours at same temperature. Approximately 1,110 grams of terpene hydrocarbons are separated by decantation. Sulphuric acid solution is allowed to fall on ice and mixture is stirred into excess alkali, constant cooling taking place. Approximately 485 to 500 grams of crude eucalyptol with adensity of 0.927 to 0.928 at 20° C. are distilled over by steam. Product may be rectified and chilled to give pure eucalyptol. From residue after steam distillation there crystallizes out on cooling about 490 to 570 grams of terpine hydrate formed by partial hydration of pinene contained in camphor oil. Rheinische Kampfer-Fabrik G. m. b. H., Duesseldorf-Oberkassel, Germany. G. P. No. 529,221, filed March 9, 1930.

Styrol and Homologues

One hundred parts by weight of styrol, obtained by catalytic de-hydrogenation of ethylbenzene, and containing 15% of ethylbenzene and 5% of toluene, are cooled to —35° C. After one hour a crystalline mass is obtained, which can be dried on suction filter. There are obtained 40 parts of pure styrol and 60 parts of mother liquor still containing 60% of styrol. Mother liquor is cooled to —50° C. and styrol, which is separated during this treatment, is likewise dried by suction filtration. Then 25 parts of 97% styrol are obtained in addition to 35 parts of mother liquor still containing approximately 40% of styrol. Mother liquor is concentrated by distillation and used again in process. I. G. Farbenindustrie A. G., Frankfurt-am-Main, Germany. G. P. No. 534,476, filed June 29, 1930.

Slightly Poisonous Anaesthetics

New anaesthetics possessing only slight poisonous action are halogenated phenylcarboxylic acid alkylamine esters. They are made by condensing phenylcarboxylic acid halogenides or their substitution products with alkyl-amines containing tertiary nitrogen. Dr. Max Bockmuehl and Dr. Leonhard Stein, Frankfurt-am-Main, Germany, assignors, I. G. Farbenindustrie A. G., G. P. No. 516,285, filed January 16, 1929.

"Les PARFUMS de FRANCE"

An International Perfumery Review
the only one published in Grasse

It is the Professional Publication
Most widely read
Most carefully edited
Most richly illustrated

With readers in every country of the world, it will carry your advertisement just where it will do the most good.

Our Copy Service Department will gladly assist you with suggestions for and preparation of your advertisements.

Les PARFUMS de FRANCE
Editorial and Business Offices
Avenue de la Gare
Grasse, France

Index to Advertisers

Alsop Engineering Co., New York ..... Cover 2
American Lanolin Corp., Lawrence, Mass 77
American Lecithin Corp., New York 63
American Potash & Chemical Corp., New York 75
Anchor Cap & Closure Corp., Long Island City, N. Y 7
Armstrong Cork Co., Lancaster, Pa 10

Bromund Co., E. A., New York 55
Bush & Co., Inc., W. J., New York 51

California Fruit Growers Exchange, Ontario, Cal 43, 73
Citro Chemical Co., Maywood, N. J 77
Cleveland Container Co., The, Cleveland, Ohio 63
Coignet Gelatines, New York 77
Colgate-Palmolive-Peet Co., Chicago, Ill 77
Colton Co., Arthur, Detroit, Mich 57
Consumers Import Co., Inc., New York 79
Crown Cork & Seal Co., Baltimore, Md 9

Dow Chemical Co., Midland, Mich ..... Cover 1
Dreyer Inc., P. R., New York 75

Foster-Forbes Glass Co., Marion, Ind 57
Fritzsche Brothers, Inc., New York 11

Givaudan-Delawanna, Inc., New York 3
Goldschmidt Corp., Th., New York 63
Gordon, H. R. M., New York 59
Gutmann & Co., Ferdinand, Brooklyn, N. Y 63

Heyden Chemical Corp., New York 67
Hopkins & Co., J. L., New York 55

Iliff-Bruff Chemical Co., Hoopeston, Ill 77
Industrial Chemical Sales Co., Inc., New York ..... Insert facing 64
Interstate Color Co., Inc., New York 77

Kimble Glass Co., Vineland, N. J 12
Klipstein & Sons Co., Inc., E. C., New York 59

Leonhard Wax Co., Inc., Theodor, Paterson, N. J 61
Liquid Carbonic Corp., Chicago, Ill ..... Insert facing 9

Magnus, Mabee & Reynard, Inc., New York 69
Mallinckrodt Chemical Works, St. Louis 14
Merck & Co., Inc., Rahway, N. J ..... Insert facing 65
Mixing Equipment Co., Inc., Rochester, N. Y 77
Monsanto Chemical Works, St. Louis ..... Insert between 64 & 65

New England Collapsible Tube Co., New York 13
N. Y. Quinine & Chemical Works, Brooklyn, N. Y 84

Owens-Illinois Glass Co., Toledo, Ohio 11

Parento, Inc., Compagnie, Croton-on-Hudson, N. Y 47
Parsons, M. W., New York 69
Penick & Co., S. B., New York 75
Pfizer & Co., Inc., Chas., New York ..... Cover 4
Phoenix Metal Cap Co., Chicago, Ill 1
Powell & Co., Inc., John, New York 71

Resinox Corp., New York 61
Rossville Commercial Alcohol Corp., Lawrenceburg, Ind 53

Schuylkill Chemical Co., Philadelphia, Pa 73
Sherka Chemical Co., Inc., New York 71
Stokes Machine Co., F. J., Philadelphia, Pa 45
Sturge, John & E., Birmingham, England ..... Insert between 64 & 65

Todd Co., A. M., Kalamazoo, Mich 77

Ungerer & Co., New York ..... Cover 3
U. S. Bottlers Machinery Co., Chicago ..... Insert facing 8
U. S. Industrial Alcohol Co., New York 5

van Ameringen-Haebler, Inc., New York 6

White Metal Mfg. Co., Hoboken, N. J 8
Will & Baumer Candle Co., Inc., Syracuse, N. Y 73
Wilson Laboratories, Chicago, Ill 75